

# report

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## Analysis of Selected Military Compensation Issues

By:

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Prepared for:

The President's Commission on Military  
Compensation  
Washington, D. C.

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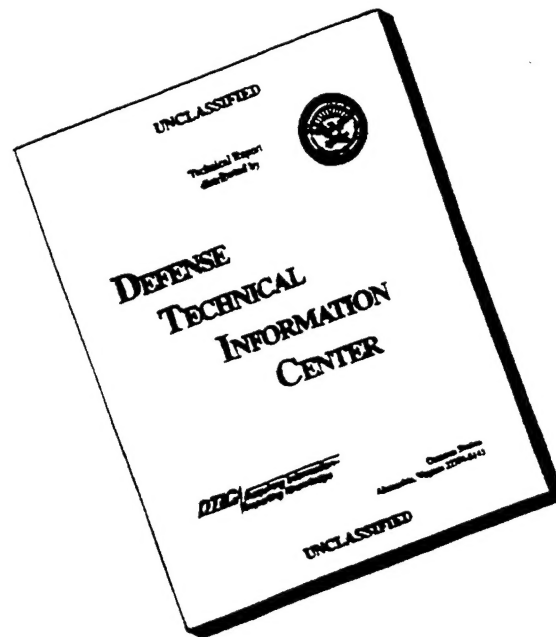
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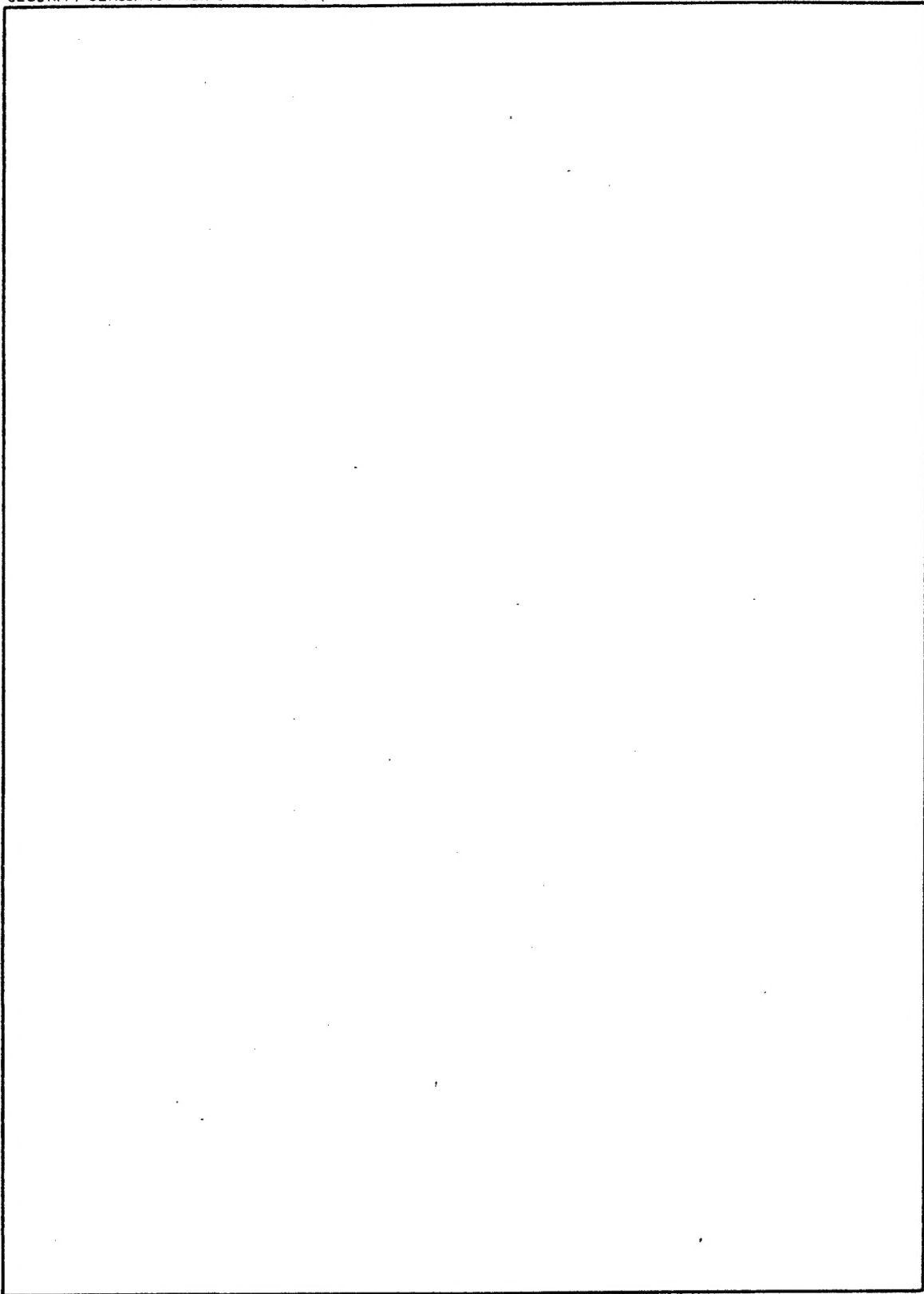
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## 1. EXECUTIVE SUMMARY

### INTRODUCTION

The President's Commission on Military Compensation was chartered to answer, among other things, the following questions:

"What form of military compensation is the most effective for meeting the needs of the nation in peace and war? Is the present pay and allowances system appropriate? If not, what changes (such as some form of military salary) offer greater potential to serve the national purpose?"

To assist the Commission in answering these questions, the General Research Corporation (GRC) was requested to conduct short-term analyses of selected military compensation issues. GRC's principal tasks were twofold:

1. Compare the costs of maintaining a standing peacetime force with an all-volunteer force (AVF) and, alternatively, with a draft, over a range of increased strengths.
2. Estimate the cost implications of selected pay policies, including substantially reduced first-term compensation, in several scenarios.

### PEACETIME COMPARISON OF AVF AND DRAFT

#### Introduction

In an all-volunteer environment, the Services must provide programs necessary to attract and retain enough qualified persons to man the force. In general, these programs consist of recruiting, advertising, pay and allowances, other targeted differential pay schemes (e.g., bonuses), and the quality of military life. If force levels are to be increased, and if the quality mix of personnel is to be maintained, these programs would have to be increased to attract the larger number of qualified personnel required to man the force.

One way to reduce these costs could be to reinstitute the draft. Costs would be expected to be less because, with part of the Services' manpower requirements being met through inductions, the number of qualified

volunteers that would be needed would be less than that required under the AVF; thus, the costs of recruiting and incentive programs could be reduced from AVF levels.

The amount of this reduction depends on the mix of programs used to attract quality volunteers. The appropriate mixes of programs to be used in the comparison between the costs of the AVF and draft at any given personnel strength are those that minimize the cost of achieving that strength (subject to constraints on personnel quality) in the two cases.

#### Minimum AVF Cost

To determine the least-cost method of increasing strengths in peacetime under the AVF, this analysis compares the costs of several alternative methods. For convenience, the analysis focuses on the enlisted force, which accounts for most personnel costs and which would experience most of the personnel supply problems in the event of a strength increase. The first method considered is that of a general pay raise. Two forms of raise are examined: one in which all enlisted personnel receive the same percentage increase in their pay and allowances, and one in which all personnel receive the same dollar increment. Alternative methods of attracting additional volunteers are increased recruiting and advertising and increased enlistment bonuses. To identify a lower bound on the cost of increasing strengths, an additional case is considered in which it is assumed that more qualified personnel could be obtained without additional recruiting or incentives; this could correspond to greater utilization of enlistment groups that are currently demand-limited, such as higher quality women or lower mental group high-school-graduate males.

The relationships between these programs and the number of volunteers are estimated here using relationships developed in past econometric studies of these programs. Increased recruiting and incentives are required only to attract "supply-limited" types of potential recruits; that is, those groups that enlist at current incentive levels in smaller numbers than the Services require. Past studies<sup>\*</sup> show that the primary supply-limited groups consist of non-prior service males who have graduated from high school and who are in the upper mental groups. Several of these studies

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<sup>\*</sup> See Refs 1 through 5, for example.

estimated the effect of recruiting and incentives on this group; although the results of these studies have not been entirely consistent, estimates used in this analysis have been selected to lie in the mid-range of those past study estimates. Sensitivity checks show that the conclusions reached in this study are consistent over most of the range of estimates of those past studies.

Table 1.1 shows how the cost of Army incentive programs would have to increase if Army enlisted strengths were increased in the AVF while maintaining the quality mix of accessions at today's level. Because a primary objective of this study is to compare the costs of maintaining strengths via the AVF and draft, the only costs considered in the table are those that would differ between the AVF and draft. These costs consist of enlisted pay and allowances, variable recruiting and advertising costs, enlistment bonuses, and variable training costs. Training costs are included because they differ between the AVF and draft (accession requirements, and thus training costs, are higher in a draft because draftees have shorter service times).

All other military personnel costs are assumed to be the same in the AVF and the draft and are not explicitly considered. With respect to reenlistment bonuses, this assumption is not strictly correct; however, separate calculations, discussed in the report, show that had changes in reenlistment bonuses been estimated explicitly, the conclusions drawn in this report would be unchanged or strengthened.

For purposes of relating the results of this Army analysis to an all-DOD analysis presented later, column 1 of Table 1.1 shows the total DOD strength that is assumed to correspond to the Army enlisted strength shown in column 2. It is assumed that the Army accounts for 75 percent of all DOD strength increases above current levels. Because the costs shown in the table are for the Army only, they do not depend on this assumption. At the present Army enlisted strength of 684,700, the total of all costs considered in the table is \$6.2 billion. This constitutes the starting point for all alternatives.



Table 1.1

SUMMARY COMPARISON OF ALTERNATIVE WAYS TO  
INCREASE ARMY STRENGTH IN THE AVF

| DOD End<br>Strength<br>(millions) | Army Enlisted<br>End Strength<br>(thousands) | Total Cost <sup>a/</sup> (Billions of constant FY78 dollars)   |   |   |                               |                                      |
|-----------------------------------|--|--|---|---|-------------------------------|--------------------------------------|
|                                   |  | Increased<br>Pay and<br>Allowances<br>(Constant<br>Percentage) | Increased<br>Pay and<br>Allowances<br>(Constant<br>Increment) | Increased<br>Recruiting<br>and<br>Advertising | More<br>Enlistment<br>Bonuses | More<br>Demand-Limited<br>Accessions |
| 2.1                               | 685  | 6.2  | 6.2   | 6.2   | 6.2                           | 6.2                                  |
| 2.3                               | 838  | 9.6  | 9.1   | 7.6   | 7.6                           | 7.5                                  |
| 2.5                               | 975  | 13.3   | 12.3  | 8.8   | 8.8                           | 8.7                                  |
| 2.7                               | 1,112  | 17.8   | 16.1  | 10.1  | 10.1                          | 9.9                                  |
| 3.0                               | 1,318  | 25.9   | 22.8  | 12.0  | 12.0                          | 11.7                                 |

<sup>a/</sup> Consists of enlisted pay and allowances, variable recruiting, advertising, enlistment bonuses, and variable Army training.

The most costly way to increase strengths is through a general pay raise in which all enlisted personnel receive the same percentage increase. Increasing Army enlisted strengths to, say, 975,000 would add \$7.1 billion to the costs considered here (totalling 13.3 billion).

If all enlisted personnel received the same absolute pay increment, instead of the same percentage increase, costs would be less, saving \$1.0 billion at an Army enlisted strength of 975,000. The saving occurs because a greater proportion of the total pay increase would be directed to first-term personnel, and it is first-term pay that has been found to dominate the perceptions of potential recruits.\*

Increased recruiting and advertising or increased enlistment bonuses are even more efficient than the constant pay increment alternative. At the 975,000 strength level, either alternative saves \$3.5 billion relative to the constant pay increment option.

The last column in Table 1.1 shows a lower bound on the cost that would have to be incurred to increase strength. This case assumes that no increases in recruiting or incentive programs are needed; total costs increase because current pay rates are paid to more people (and training costs increase because more people are being trained). One way for the Army to move along this lower bound is to accept more of what are now demand-limited volunteer groups (such as higher quality women); however, at some unknown point, a supply constraint for these groups would be encountered and recruiting and incentive costs would rise above those shown in the table. At the 975,000 strength, the Army could save at most an additional \$100 million by increasing accessions of groups of appropriate quality which are not supply-limited or by some no-cost way of increasing enlistment propensities of the supply-limited group.

Results in Table 1.1 show that general pay raises are not a very efficient way to attract additional volunteers. Some combination of increased recruiting and advertising, more enlistment bonuses, and greater utilization of demand-limited groups should be preferred.

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\* See, for example, Refs 2 and 3.

The reliability of the estimated costs of each alternative decreases as strengths increase significantly above current levels; however, sensitivity calculations show that the differences among the alternatives, particularly at strengths only modestly higher than current levels, are reliable indicators of the preferred alternatives.

#### Comparison With the Draft

If the draft were reestablished as a means of maintaining a standing peacetime force, some of the AVF programs could be reduced.\* The extent of reduction depends on the type of draft and the desired composition of the enlisted force. This analysis assumes that if the draft were reestablished it would be similar to the system used during the last years of Vietnam, and that the quality of draftees and draft-induced volunteers would be about the same as at that time.

It is further assumed that the size and quality of the career force must meet certain minimum standards. Because reenlistment rates of draftees and draft-induced volunteers are very low, certain "AVF" programs are still required under a draft, either to induce reenlistments or to attract quality true-volunteers who have higher reenlistment propensities. To show the sensitivity of this constraint, two different assumptions have been made concerning the number of first-term reenlistments required under the draft: one assumption maintains the current proportional relationship between the number of first-term reenlistments and total strength (this was the assumption made in all AVF cases considered); the alternative assumption allows the career force to be reduced to the extent that the total number of first-term reenlistments remains at current (FY78) levels as total strengths are increased.

It is assumed that pay and allowances would be maintained at current rates (relative to alternative civilian pay rates) if a draft were reestablished. This is a major assumption because pay and allowances dominate the cost of the total incentive package. The previous analysis of the AVF showed that pay increases are not an effective substitute for other incentives; the same would be true under the draft. As for decreases in

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\*The cost of the AVF was recently estimated by the GAO (Ref 6). Appendix B shows that the facts presented by the GAO do not significantly alter the findings of this analysis.

relative pay, little quantitative information is available about their effects. Reducing pay of careerists would undoubtedly reduce reenlistments, though to an unknown extent. It is conceivable that some savings could be achieved by reducing first-term pay and increasing other first-term incentives; however, this has not been analyzed.\*

Although the analysis of the AVF considered only the Army, analysis of the draft requires consideration of the other Services as well because the draft induces additional volunteers to those Services and thus reduces their accession-related costs. The costs to be considered thus must be expanded to include the pay and allowances, variable recruiting, and advertising of all Services. As for training, only Army costs need be considered because only they differ between the AVF and draft; the number of accessions, and thus training costs, of the other Services would remain the same.

Table 1.2 compares costs under the AVF and under the two draft cases (first-term reenlistments proportional to strength, and first-term reenlistments constant). As before, it is assumed that the Army accounts for 75 percent of DOD strength increases above current levels; thus the DOD strengths shown in Table 1.2 correspond to those in Table 1.1.

Table 1.2 shows that reverting to a draft to sustain a peacetime military strength would save only a few hundred million dollars out of a total program (including pay) costing many billions. For example, at a DOD strength of 2.5 million, reverting to the draft saves \$200 million relative to the AVF if first-term reenlistments are maintained at AVF levels. If the Army could accept a reduction in first-term reenlistments to FY78 levels, the total savings would increase to \$500 million because significantly fewer quality volunteers would be needed for input to the career force.

The costs in Table 1.2 do not reflect societal costs that occur in the draft because some draftees are less productively employed in the military than they would be in the private economy. (In the AVF, free-market forces tend to move members of the labor force to jobs in which they are most productively employed.) Inclusion of these societal costs would increase the cost of the draft relative to that of the AVF.

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\* Note that if civilian pay rises faster than military pay, relative military pay decreases, even though absolute levels of military pay increase.

Table 1.2

SUMMARY COMPARISON OF COSTS THAT DIFFER  
BETWEEN AVF AND DRAFT

| Total<br>DOD End<br>Strenght<br>(millions) | Total cost <sup>a/</sup> (billions of constant FY78 dollars) |   |
|--|--|---|
|  | AVF  | Draft<br>Reenlistments<br>Proportional to Strength<br>Reenlistments<br>at FY78 Levels |
| 2.1  | 15.9   | 15.8<br>15.7  |
| 2.3  | 17.6   | 17.5<br>17.3  |
| 2.5  | 19.2   | 19.1<br>18.9  |
| 2.7  | 20.9   | 20.8<br>20.5  |
| 3.0  | 23.4   | 23.3<br>22.9  |

<sup>a/</sup> The following costs are considered:

- Enlisted pay and allowances
- Recruiting (variable costs only)
- Advertising
- Enlistment bonuses
- Army training costs (variable costs only)

## COST IMPACT OF ALTERNATIVE PAY POLICIES

A separate analysis was conducted to determine the cost impact of selected compensation policies being considered by the Commission staff. The purpose of this analysis was to provide cost information that could be used by the staff in subsequent deliberations; no attempt is made to assess the incentive effects of these policies in either the AVF or draft.

Four policies considered involve substantially reduced pay and allowances to E-1s and E-2s:

- Basic pay and allowances at Federal minimum wage.
- Basic pay only at poverty level (allowances extra).
- Basic pay and allowances at poverty level.
- Basic pay only at Korean war rates, in real terms (current allowances extra).

A fifth policy was also examined in which all personnel receive a salary based on regular military compensation (RMC) at FY 1978 rates.

To determine the cost impact of each of these pay options, several scenarios involving different force levels were selected and a force composition was derived for each so that total military personnel appropriation costs could be estimated. Six scenarios are considered:

- Peacetime
  - FY 1978 authorized force levels (2.1 million)
  - A force increased by 200,000
- Partial mobilization
  - Presidential call-up of 1 million Ready Reserves (3.1 million)
- Full mobilization
  - Vietnam peak force mix (3.5 million)\*
  - 3.5 million mobilization\*
  - 4.5 million mobilization

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\*Two scenarios are considered at this strength level to test the sensitivity of the results to force composition assumptions. The Vietnam case represents an historical data point; the 3.5 million mobilization case represents a notional plan.

Table 1.3 presents the total military personnel appropriation costs of those policies involving reduced pay to E-1s and E-2s under each scenario and compares them with costs under current pay policy. At current force levels, paying E-1s and E-2s the minimum wage would save \$400 million relative to current policy. If a base pay equal to the poverty wage were paid, with allowances extra, the savings would be \$700 million. If the cost of the allowances were deducted from the poverty wage, savings would increase to \$1.3 billion. Korean War pay rates for E-1s and E-2s were below that of the currently defined poverty level, in real terms; payment of these rates (with allowances extra) saves \$1.0 billion relative to current policy.

The savings under these pay alternatives are larger at higher force levels where there are more E-1s and E-2s. At the largest force considered, a strength of 4.5 million, the minimum wage option saves \$2.0 billion relative to current pay rates. A poverty level wage, with the cost of allowances deducted from the wage, saves \$6.4 billion.

Table 1.4 shows the total military personnel appropriation costs that would arise if a military salary based on current RMC were instituted. Relative to current pay, the military personnel appropriation would increase by \$1.5 billion at current strengths; this increase rises to \$3.0 billion at a strength of 4.5 million.

#### SUMMARY

The present analysis supports the following conclusions:

1. The cost of increasing peacetime strengths in an all-volunteer force depends on the mix of programs used to attract additional volunteers. Increases in recruiting and advertising and enlistment bonuses, and greater utilization of women, are less costly alternatives than are general increases in pay and allowances (relative to civilian wages) whether these pay increases are proportional increases or fixed dollar increases.
2. Reverting to the draft in peacetime, and maintaining the quality mix of accessions and current first-term reenlistment rates,

Table 1.3

EFFECT OF REDUCED PAY TO E-1s AND E-2s ON  
TOTAL DOD ACTIVE MILITARY PERSONNEL APPROPRIATIONS  
(Billions of constant FY78 dollars)

| Scenario                     | Total strength (millions) | Current pay | Minimum wage to E-1/E-2s (allowances deducted) | Poverty wage to E-1/E-2s (allowances extra) |                       | Korean War Real Pay to E-1/E-2s (allowances extra) |
|------------------------------|---------------------------|-------------|--|---|-----------------------|--|
|                              |                           |             |  | (allowances extra)                          | (allowances deducted) |  |
| 1. Current active forces     | 2.1                       | 25.3        | 24.9   | 24.6  | 24.0                  | 24.3   |
| 2. 200,000 Increment         | 2.3                       | 27.5        | 27.1   | 26.8  | 26.2                  | 26.5   |
| 3. Presidential call-up      | 3.1                       | 38.0        | 37.5   | 37.0  | 36.3                  | 36.7   |
| 4A. Vietnam peak             | 3.5                       | 40.8        | 40.1   | 39.6  | 38.6                  | 39.1   |
| 4B. 3.5 Million mobilization | 3.5                       | 40.9        | 39.9   | 39.1  | 37.7                  | 38.4   |
| 5. 4.5 Million mobilization  | 4.5                       | 49.2        | 47.2   | 45.7  | 42.9                  | 44.3   |



Table 1.4

EFFECT OF RMC SALARY ON  
TOTAL DOD ACTIVE MILITARY PERSONNEL APPROPRIATIONS  
(Billions of constant FY78 dollars)

| <u>Scenario</u>              | <u>Total<br/>strength<br/>(millions)</u> | <u>Current<br/>pay + tax<br/>advantage<br/>(RMC)</u> | <u>Current<br/>pay</u> |
|------------------------------|--|--|------------------------|
| 1. Current active forces     | 2.1                                      | 26.8   | 25.3                   |
| 2. 200,000 Increment         | 2.3                                      | 29.2   | 27.5                   |
| 3. Presidential call-up      | 3.1                                      | 40.3   | 38.0                   |
| 4A. Vietnam peak             | 3.5                                      | 43.1   | 40.8                   |
| 4B. 3.5 Million mobilization | 3.5                                      | 43.3   | 40.9                   |
| 5. 4.5 Million mobilization  | 4.5                                      | 52.2   | 49.2                   |

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would save little relative to the total cost of all incentive programs (including pay), assuming that pay and allowances would remain at current rates (relative to civilian wages) regardless of whether there was an AVF or a draft. Calculations show that savings to the government of no more than \$400 million per year would occur for increases in Army strengths of as much as nearly 50 percent.

3. Reducing pay and allowances of E-1s and E-2s to the minimum wage would save \$400 million at current force levels. A reduction to the poverty level would save a total of \$1.3 billion. At a DOD strength of 4.5 million, these savings would be \$1.8 billion and \$6.3 billion, respectively. These savings do not reflect any cost increases that might have to be incurred to mitigate the disincentive effects of these pay reductions.

As the purpose of these analyses was to present quantitative data in support of Commission deliberations, no recommendations are presented. The chapters and appendixes which follow provide further detail as well as an explanation of calculation methodologies and underlying assumptions.

## 2. COMPARISON OF AVF AND DRAFT COST IN A PEACETIME ENVIRONMENT

### INTRODUCTION

Since the introduction of the All-Volunteer Force (AVF) in 1972, several questions have arisen concerning the viability of the AVF at strengths greater than currently authorized, and concerning the relative costs of AVF and draft operations at various strengths. The answers to these questions quite clearly depend on the kind of strength required in terms of quality and experience mix, the relative sizes of the services and on the overall perceived politico-military environment.

Whether an AVF or a draft operation is assumed, there are several basic elements to the analysis. First, we must determine the accession requirements to support the force, and especially the requirements for High School Diploma Graduates (HSDG), Mental Groups I-III A True Volunteer males, which is the only accession group assumed to be supply limited. Second, we must determine the cost of acquiring the required numbers of supply limited volunteers; and third, determine what the overall cost differences are between AVF and draft operations. In this latter analysis, only those costs which differ between the two cases need be included. In particular, the following costs are explicitly estimated:

- Variable recruiting and advertising costs
- Pay and allowances, including enlistment bonuses
- Marginal training costs

### ACCESSION REQUIREMENTS TO SUPPORT MILITARY PEACETIME STRENGTH

The cost comparison of the AVF and draft requires estimation of the accessions needed to support the military peacetime strength at various strength levels. This section begins by illustrating the methodology for a single Army enlisted strength; later, results are presented for a range of Army enlisted strengths.

In the illustration, total DOD active strengths are assumed to increase from 2.085 million to 2.3 million. It is assumed that 75 percent of this increase (165,000) would go to the Army. Based on historical relationships between officer/enlisted ratios and total strength (see Chapter 3), this represents an increase of 152,900 in Army enlisted strength (totalling 837,600).

We assume that only HSDG I-IIIAs males are supply limited and so seek a means of determining the minimum number of volunteers of that group required to meet Army strength objectives while, at the same time, constraining certain basic policy objectives. These policy constraints place lower bounds on the number of first-term reenlistments and on the fraction of accessions who are HSDG I-IIIs. These lower bounds are calculated to be consistent with 1978 figures and objectives.

#### AVF Accession Requirements

One simple accessions policy in an AVF environment would be to minimize quality accessions subject only to a strength (i.e., man-year) objective and a lower bound on the quality enlistees as a fraction of the total enlistees.

These objectives and bounds can be described by the following pair of equations:

$$E_h H + E_n N = Y \quad (2.1)$$

$$H \geq q (H+N) \quad (2.2)$$

where:

- $H$  and  $E_h$  are, respectively, the number of quality (i.e., HSDG, MG I-IIIa) true volunteer male accessions to be procured, and the expected number of man-years to be obtained from such an accession;
- $N$  and  $E_n$  are the corresponding quantities for all other true volunteer male accessions;
- $Y$  is the required number of enlisted man-years; and  $q$  is the fraction of the enlisted accessions which are required to be HSDG, Mental Group I-IIIa.

In 1977 Army enlisted strength was 684,700; adding 152,600 yields  $Y = 837,600$ . Also in 1977,  $q = .329$ .

Values of  $E_h$  and  $E_n$  can be estimated as follows: the expected man-years per accession in 1977 is the man-years divided by the number of accessions and is  $677,200/170,700 = 3.97$ . Retention studies previously done by GRC (reference 1) show that  $E_h$  is about  $1.18 \times (E_n)$  which leads to estimates of  $E_h = 4.40$  and  $E_n = 3.75$ . These coefficients when used in equations 2.1 and 2.2 yield values of H and N of 68,000 and 138,700, respectively: a total accession requirement of 206,700. (This is within 1% of the requirement that would arise from a direct extrapolation of the total 1977 accessions.)

#### Accession Requirements With A Draft

A second manpower policy allows draftees to be included in the accession mix. Additional constraints are added to place a lower bound on first-term reenlistment objectives and to reflect the relationship between numbers of draftees and draft-motivated volunteers. In the presence of a draft, first-term adverse attrition could decline by as much as 25 percent, with the virtual elimination of Trainee Discharge and Expeditious Discharge programs, leading to gains in expected man-years of about 3 percent and to adjusted values for  $E_h$  and  $E_n$  of 4.50 and 3.90. Our estimates of draft-motivated volunteers' expected man-years and draftees' expected man-years are 3.3 and 2.1, reflecting both low adverse attrition and low reenlistment propensities. (It is further assumed that 2-year enlistments are not permitted.) The man-year objective then can be stated as:

$$4.50H + 3.90N + 3.3M + 2.1D = 837,600 \quad (2.3)$$

where H and N are as above and where M and D are respectively the number of draft motivated volunteers and the number of draftees.

Experience in 1970-71 shows that 67 percent of the Army's draft-motivated volunteers were HSDG I-IIIAs as were 47 percent of the draftees. Further, for each draftee, the Army got .36 draft-motivated volunteers.

These figures lead to two additional equations for the manpower program:

$$M = .36D \quad (2.4)$$

$$H + .67M + .47D = .329 (H+N+M+D) \quad (2.5)$$

The final equation to be included will reflect the requirement for first-term reenlistments. Cohort reenlistment rates (reenlistments per accession) of draftees are expected by the Army to be no more than 5 percent. Reenlistment rates of volunteers are estimated (Ref 1) to be 19.5 percent for HSDG I-IIIAs and 18 percent for other volunteers. Reenlistment rates for draft-motivated volunteers are not known, but probably are no greater than 10 percent. The 1978 first-term (FT) reenlistment objective is 30,000. At least 36,700 FT reenlistments would be required to maintain the current FT/Career ratios if the Army enlisted strength is increased by 152,900. These reenlistment rates lead to the equation:

$$.195H + .18N + .1M + .05D = 36,700 \quad (2.6)$$

All the factors developed thus far are summarized in Table 2.1.

Table 2.1

FACTORS USED IN COMPUTING ARMY ACCESSION REQUIREMENTS

| Factor                        | Accession Group                    |                                  |                                      |                 |
|-------------------------------|------------------------------------|----------------------------------|--------------------------------------|-----------------|
|                               | <u>Quality True<br/>Volunteers</u> | <u>Other True<br/>Volunteers</u> | <u>Draft-Motivated<br/>Enlistees</u> | <u>Draftees</u> |
| Expected Man Years (AVF)      | 4.40                               | 3.75                             |                                      |                 |
| Expected Man Years<br>(Draft) | 4.50                               | 3.90                             | 3.30                                 | 2.10            |
| Cohort Reenlistment<br>Rate   | .195                               | .18                              | .10                                  | .05             |
| "Quality" Fraction            | 1.00                               | .0                               | .67                                  | .47             |

Given the objective of either minimizing H, or maximizing D, the solution of this set of equations is:

H = 59,900  
N = 131,300  
M = 4,100  
D = 11,500  
Total = 206,800

which is a total accession level only slightly greater than the AVF requirements but with the requirements for true volunteer HSDG I-IIIAs reduced by 8,100. Under this result, the loss in expected average man-years per accession due to the presence of draftees and draft-motivated volunteers is almost offset by gains in expected volunteer man-years arising from the assumed elimination of voluntary discharge programs. Because of the constraint on first-term reenlistments, the number of draftees that the Army can afford to take without substantially increasing reenlistment bonuses is quite small.

Further analysis of the 1970-71 accession data also shows that the drafting of 11,500 by the Army should yield the following draft-motivated HSDG I-IIIAs for the four Services:

Army - 2,715  
Navy - 1,470  
Marines - 300  
Air Force - 1,975

Because the constraint on first-term reenlistments has such a strong effect on the number of draftees to be taken, a second option is considered here that relaxes the first-term reenlistment objective in the presence of a draft — first-term reenlistments are held to the 1978 objective. The system of equations to solve this option is identical to the preceding case, with the first-term reenlistment objective set equal to 30,000 rather than 36,700.

#### Effects of Varying End Strengths on Total DOD "Quality" Accession Requirements

In the preceding sections, three options were developed for defining non-prior-service accessions to support end strength objectives in the AVF

or draft environments. In this section, these methods are extended to evaluate quality true volunteer requirements for all DOD at various strength (man-year) levels from 2.1 to 3.0 million. The implications of these options are shown in Table 2.2 in terms of quality males (female accessions are assumed to be proportional to quality male accessions in 1977 proportions). As in the preceding section, the Army gets 75 percent of any increase over current strength levels. We assume that the remaining 25 percent goes to the Air Force.

Total Army accessions are shown in Table 2.3. It is assumed that all draftees go to the Army and the expected service times for other Services' volunteers do not change from case to case so that only the Army's total accessions would vary for a given end strength.

#### COSTS OF MEETING ACCESSION REQUIREMENTS

In the preceding section, the quality volunteer accession requirements were derived for the AVF and draft operations over a range of strengths for DOD under specific assumptions concerning the relationship between total DOD strength and the strengths of the individual Services. In this section the costs of meeting these various accession requirements are estimated. Attention is given primarily to those costs which vary between the AVF and draft operations. No attempt to estimate total manpower-related costs is made.

#### Review of Relationship Between Program Cost Elements and Quality Volunteer Accession Levels

Over the past several years many econometric analyses have been conducted of volunteer enlistments (refs 1, 2, 3, 4, 5).<sup>\*</sup> In general, these have concentrated on a few critical variables:

- Relative military/civilian compensation,
- Civilian unemployment,
- Military recruiting and advertising,
- The size of the Qualified Military Available (QMA) pool.

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<sup>\*</sup>References 2 and 3 include extensive literature reviews and evaluations of other related studies.



Table 2.2

HIGH SCHOOL DIPLOMA GRADUATE MENTAL GROUP I-III A,  
MALE TRUE VOLUNTEER SUPPLY REQUIREMENTS

| DOD<br>End<br>Strength | AVF  |      |      |      | Draft Case 1 <u>a/</u> |      |      |      | Draft Case 2 <u>b/</u> |      |      |      |
|------------------------|------|------|------|------|------------------------|------|------|------|------------------------|------|------|------|
|                        | A    | N    | MC   | AF   | A                      | N    | MC   | AF   | A                      | N    | MC   | AF   |
| 2.1                    | 41.8 | 44.7 | 18.9 | 46.2 | 36.8                   | 43.5 | 18.6 | 44.5 | 20.0 <sup>c/</sup>     | 39.7 | 17.7 | 39.4 |
| 2.3                    | 51.2 | 44.7 | 18.9 | 50.4 | 45.0                   | 43.2 | 18.5 | 48.4 | 20.0                   | 36.6 | 17.0 | 39.4 |
| 2.5                    | 59.6 | 44.7 | 18.9 | 54.6 | 52.4                   | 42.9 | 18.5 | 52.2 | 20.0                   | 33.8 | 16.4 | 39.9 |
| 2.7                    | 67.9 | 44.7 | 18.9 | 58.8 | 59.8                   | 42.7 | 18.4 | 56.1 | 20.0                   | 31.0 | 15.7 | 40.4 |
| 3.0                    | 80.5 | 44.7 | 18.9 | 65.1 | 70.9                   | 42.3 | 18.3 | 61.9 | 20.0                   | 26.8 | 14.8 | 41.0 |

a/

Army first-term reenlistment objectives constrained to be proportional to Army strength at the 1978 ratio.

b/

Army first-term reenlistment objectives constrained to be equal to 1978 objective of 30,000.

c/

Assumes that there will always be at least 20,000 quality male true volunteers to the Army regardless of draft environment or level of recruiting, etc. To satisfy the constraints discussed in the text, no quality male volunteers are required in Draft Case 2.

Table 2.3

## TOTAL ENLISTED ACCESSION REQUIREMENTS FOR THE ARMY

| <u>End Strength</u> |                      | <u>AVF</u> | <u>Army Accessions (thousands)</u> |                 |                             |                 |
|---------------------|----------------------|------------|------------------------------------|-----------------|-----------------------------|-----------------|
| <u>Total DOD</u>    | <u>Army Enlisted</u> |            | <u>Draft case 1-<br/>a/</u>        |                 | <u>Draft case 2-<br/>b/</u> |                 |
|                     |                      |            | <u>Total Accession</u>             | <u>Draftees</u> | <u>Total Accessions</u>     | <u>Draftees</u> |
| 2,085               | 684.7                | 172.7      | 172.8                              | 9.6             | 190.2                       | 38.7            |
| 2,300               | 837.6                | 211.3      | 211.4                              | 11.7            | 241.8                       | 62.6            |
| 2,500               | 975.0                | 245.9      | 246.0                              | 13.6            | 288.1                       | 84.0            |
| 2,700               | 1,112.3              | 280.6      | 280.7                              | 15.6            | 334.3                       | 105.4           |
| 3,000               | 1,318.4              | 332.6      | 332.8                              | 18.4            | 403.8                       | 137.5           |

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a/ With first-term reenlistment objectives constrained to be proportional to total strength.

b/ With first-term reenlistment objectives constrained to be equal to 1977 objective of 30,000.

It seems generally agreed that a multiplicative model should be most appropriate to characterize the production function that relates these variables to volunteer enlistments. However, there is less agreement on the specific form of the model and on methods of estimating the coefficients in such a model. Certain problems have been encountered in these analyses. Primary among them have been the following:

- In time-series analyses, high correlations among the dependent variables, especially between pay and recruiting variables has made it almost impossible to separate their effects by conventionally accepted methods of analysis.
- In cross-sectional analyses, it is almost impossible to separate regional differences in civilian wages, unemployment and propensities to enlist.
- In several analyses, the quality of the data available for analysis has been highly suspect.
- In most early analyses, it was either not possible to distinguish between supply-limited and demand-limited accession groups or it was not recognized that there were different supply groups.

So far as GRC is aware, there has been no analysis completed which overcomes all of these problems. There is, therefore, no set of coefficients for a multiplicative production function, derived in a single unified analysis, which is capable of achieving a consensus of agreement among knowledgeable manpower analysts.

On the other hand, there do appear to be definable ranges within which these coefficients lie, ranges which can be derived from a consensus of past and present analyses. For Army quality volunteers, the elasticity<sup>\*</sup> of accessions relative to numbers of recruiters, or variable recruiting budgets, seems almost certainly to lie in the range .25-.40 (ref 1, 2, 4). The most recent GRC cross-sectional analysis (ref 4) yields a value of .33 which we will use in the cost analyses to follow. For advertising, most analyses (see Ref 7) have found elasticities (for quality Army volunteers) lying in a range of .0-.10. Advertising industry sources indicate acceptance of a

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\*The elasticity is defined as the percent change in accessions divided by the percent change in the factor such as relative pay, recruiters, etc.

value of .06 for the effectiveness of commercial advertising. Since this lies in the .0-.10 range, we will use .06 for our analyses. Relative pay remains with the least accurately measured effect. The referenced analyses of this supply group have yielded pay elasticities ranging from zero in a pooled time-series/cross-sectional analysis to 1.2 for a time-series analysis with the recruiting effect excluded so that the value 1.2, in effect, confounds pay effects with recruiting effects. There is, of course, no explicit, after the fact, way to separate these confounded effects. The overall results do suggest, however, that the pay elasticity may reasonably be believed to lie between .60 and 1.0. In the analyses to follow, we use a pay elasticity of .8 and discuss the sensitivity of our overall results to variations in this elasticity.

#### AVF Costs to Support Increased End Strengths

This section considers the costs of supporting the AVF at various DOD end strengths. As noted previously, for force increases above the baseline of 2.1 million, it is assumed that 75 percent of the increase is assigned to the Army and 25 percent to the Air Force. Because the Air Force can attract quality enlistees with relative ease and because of the relatively small numbers of such enlistees required, the analysis concentrates upon maintaining the Army enlisted end strengths and quality levels indicated by increased DOD end strengths.

Five alternatives for attracting the required numbers of quality enlistees are considered:

- Provide a general across-the-board percentage increase in enlisted pay and allowances.
- Provide an incremental increase in enlisted pay and allowances to all enlisted personnel.
  - Increase recruiting and advertising.
  - Increase use of enlistment bonuses.
  - Decrease the requirement for quality males by increasing the number of quality women enlistees.

Each alternative considered is a "pure strategy" in the sense that all other procurement expenditures are held constant at baseline levels, while only the alternative under consideration is used to provide the required accessions over the baseline level. While mixed strategies can be analyzed, the complex effects of some of these factors precluded the development of required analytical methodologies for such analyses within the limited time available for this study. However, in terms of the basic questions which this study has addressed, there is no real gain in insight from evaluation of mixed strategies unless one is prepared to trade off pay cuts against increases in budgets for the more cost-effective programs. This study has not attempted to do this because of uncertainties about the supportability of pay cuts. Joint optimization of recruiting, advertising and enlistment bonus budgets is possible, as well as increases in demand-limited accessions to the point they become supply-limited.

Alternative: Increase Base Pay and Allowances. The pay measure considered in the analysis is the combined value of base pay, BAS and BAQ. Since BAS and BAQ are given both in cash and in kind, a definitional problem arises with regard to the dollar value associated with increases in these allowances. For the purposes of this analysis, we use FY78 as a baseline and assume any increase in BAS and BAQ to occur according to the cash/in-kind mix prevailing in FY78. Thus, for a given increase in base pay, BAS and BAQ, the required budget appropriation is neither the cost of providing benefits in cash nor in kind but rather the cost of maintaining the current mix of in cash and in kind benefits. Furthermore, for convenience in the following discussions, unless otherwise indicated, "pay" will be taken to mean the combined value of base pay, BAS and BAQ, and the values given for pay will be the average cost to the government of providing the benefit.

The effect of pay upon quality male accessions is estimated by a Cobb-Douglas production function having a pay elasticity of 0.8. When all other factors are held constant, this function has the form

$$N = c P^{0.8} \quad (2.7)$$

where  $N$  is the number of quality male accessions,

$P$  is the measure of real pay per enlistee, and

$c$  is the scaling factor that yields equality between the left- and right-hand sides of the equation at some baseline.

Using equation 2.7 as a beginning one can compute the increase in pay required to secure a desired increase in quality accessions as

$$\Delta = (N/N_0)^{1.25} \quad (2.8)$$

where  $\Delta$  is the change in the baseline pay rate required to procure  $N$  quality male accessions, and

$N_0$  is the baseline number of quality male accessions.

The required pay rate,  $P$ , is given by

$$P = \Delta P_0 \quad (2.9)$$

where  $P_0$  is the baseline pay rate.

The objective of increasing pay considered here is to make first-term pay sufficiently attractive to enough people so that the quality male procurement goal is satisfied. However, the major cost of pay increases comes with adjusting pay rates for other grades so as to maintain orderly pay progression from grade to grade. (Enlistment bonuses are considered later as an example of differential pays which are applied only to the people being recruited and which do not incur the costs of major upwards adjustments to the entire pay table.) Two methods of increasing pay in the lower grades while still maintaining pay separation between grades are considered in the analysis:

- All increases are to be general percentage increases applied across all enlisted pay grades. This is the method of increasing pay employed of recent years whereby everyone receives the same percentage increase regardless of his base compensation level.

- All pay grades receive the same incremental increase in base pay, BAS and BAQ. Under this method some way must be found of computing the size of the increment required to produce the necessary quality accessions. For the purposes of evaluating this strategy, E2 pay was taken to be the relevant pay measure for recruiting purposes since most supply analyses have used E2 compensation to estimate relative military pay from the potential recruit's perspective. Accordingly, the incremental value of bringing E2 pay up to the necessary level was added to every enlisted

pay grade. The necessary increase in E2 pay was computed from equation 2.9 by taking  $P_0$  to refer to E2 compensation rather than average enlisted compensation.

As an example of the computational methodology employed, consider the cost of increasing Army end strengths pursuant to a DOD increase from 2.1 to 2.3 million. Table 2.2 indicates that quality Army accessions must be increased from 41,800 to 51,200. The associated increase in baseline compensation is

$$\Delta = (51,200/41,800)^{1.25} = 1.29$$

If a general pay increase is to be effected,  $\Delta$  is applied to the average enlisted base pay, BAS and BAQ baseline of \$8,459. Thus average enlisted pay under this strategy rises from \$8,459 to \$10,900.

If an incremental pay increase is to be effected,  $\Delta$  is applied to the E2 baseline of \$6,631. E2 pay increases by \$1,914 to \$8,545 just as in the preceding case; but average enlisted pay increases from \$8,459 to \$10,373 which is less than in the previous case.

The results of these per-capita computations for the end strengths considered for the AVF are presented in Table 2.4. The resulting costs of increasing Army AVF strength for each of these alternatives holding other expenditures constant are shown in Tables 2.5 and 2.6.\*

Alternative: Increase Recruiting and Advertising. Under this alternative, increases in quality accessions are obtained through increasing recruiting and advertising expenditures while holding pay rates and enlistment bonus expenditures constant. In order to estimate the required expenditures, baseline recruiting and advertising budget and productivities were submitted to the GRC Optimal Budget Allocation Model (OBAM) which optimally reallocates the combined budgets between recruiting and advertising and estimates the minimal budgets required for accession levels other than the baseline. Costs of increasing Army AVF strength through increasing recruiting and advertising are presented in Table 2.7.

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\* For this analysis, the marginal training cost for the Army is estimated to be \$1000. There is no supported basis available for this estimate, but it is believed that, if in error, it is a slight underestimate. To this extent, draft costs are higher relative to the AVF than estimated here because there are more accessions under the draft.

Although the strengths shown in these and subsequent tables are end strengths, costs are computed as a function of many years. The computations assume that the ratio of many years to end strength in the FY78 program is maintained at all strength levels.

Table 2.4

PER-CAPITA EXPENDITURES TO PROVIDE INCREASES IN PAY AND ALLOWANCES  
REQUIRED TO SUPPORT INCREASED ARMY ENLISTED END STRENGTHS  
(FY78 BASE)

| DOD<br>End Strength<br>(millions) | Army Enlisted<br>End Strength<br>(thousands) | Army Per Capita Expenditures for<br>Constant Percentage Pay Increases |                     | Army Per Capita Expenditures for<br>Constant Incremental Pay Increases |                     |
|-----------------------------------|--|---|---------------------|--|---------------------|
|                                   |  | Average<br>E2   | Average<br>Enlisted | Average<br>E2  | Average<br>Enlisted |
| 2.1                               | 684.7  | \$ 6,631  | \$ 8,459            | \$ 6,631   | \$ 8,459            |
| 2.3                               | 837.6  | 8,545   | 10,900              | 8,545  | 10,373              |
| 2.5                               | 975.0  | 10,332  | 13,180              | 10,332   | 12,160              |
| 2.7                               | 1,112.3                                      | 12,160  | 15,513              | 12,160   | 13,988              |
| 3.0                               | 1,318.4                                      | 15,044  | 19,191              | 15,044   | 16,872              |

## NOTE:

Current proportions of single/married personnel and allowances in cash/in kind are assumed constant.



Table 2.5

COST OF INCREASING ARMY STRENGTHS IN AVF WHILE MAINTAINING QUALITY:  
CONSTANT PERCENTAGE INCREASE IN PAY AND ALLOWANCES ACROSS ALL ENLISTED GRADES

| DOD END<br>STRENGTH <sup>a/</sup><br>(millions) | ARMY<br>ENLISTED<br>END STRENGTH<br>(thousands) | QUALITY NPS<br>ACCESSIONS <sup>b/</sup><br>(thousands) | Costs (millions of constant FY78 dollars) |  |                       |   | TOTAL  |
|---|---|--|---|--|-----------------------|---|--------|
|   |   |  | ENLISTED<br>BASE PAY<br>AND<br>ALLOWANCES | VARIABLE<br>RECRUITING<br>AND<br>ADVERTISING | ENLISTMENT<br>BONUSES | VARIABLE<br>TRAINING <sup>c/</sup><br>COSTS |        |
| 2.1   | 684.7   | 41.8 15.0  | 5,792                                     | 160  | 58                    | 173   | 6,183  |
| 2.3   | 837.6   | 51.2 18.3  | 9,130                                     | 160  | 58                    | 211   | 9,559  |
| 2.5   | 975.0   | 59.6 21.3  | 12,850                                    | 160  | 58                    | 246   | 13,314 |
| 2.7   | 1,112.3   | 67.9 24.4  | 17,255                                    | 160  | 58                    | 281   | 17,754 |
| 3.0   | 1,318.4   | 80.5 28.9  | 25,301                                    | 160  | 58                    | 333   | 25,852 |

<sup>a/</sup> Assumes Army accounts for 75 percent of DOD strength increase.

<sup>b/</sup> Quality mix of all accessions held constant.

<sup>c/</sup> Assumes marginal training cost of \$1,000 per accession.

Table 2.6

COST OF INCREASING ARMY STRENGTHS IN AVF WHILE MAINTAINING QUALITY:  
CONSTANT INCREMENT IN PAY AND ALLOWANCES ACROSS ALL ENLISTED GRADES

| DOD END<br>STRENGTH <sup>a/</sup><br>(millions) | ARMY<br>ENLISTED<br>END STRENGTH<br>(thousands) | QUALITY NPS <sup>b/</sup><br>ACCESSIONS<br>(thousands) |        | Costs (millions of constant FY78 dollars) |  |                       |   | TOTAL  |
|---|---|--|--------|---|--|-----------------------|---|--------|
|   |   | MALE   | FEMALE | ENLISTED<br>BASE PAY<br>AND<br>ALLOWANCES | VARIABLE<br>RECRUITING<br>AND<br>ADVERTISING | ENLISTMENT<br>BONUSES | VARIABLE<br>TRAINING <sup>c/</sup><br>COSTS |        |
|   |   |  |        |   |  |                       |   |        |
| 2.1   | 684.7   | 41.8   | 15.0   | 5,792                                     | 160  | 58                    | 173   | 6,183  |
| 2.3   | 837.6   | 51.2   | 18.3   | 8,688                                     | 160  | 58                    | 211   | 9,117  |
| 2.5   | 975.0   | 59.6   | 21.3   | 11,856                                    | 160  | 58                    | 246   | 12,320 |
| 2.7   | 1,112.3   | 67.9   | 24.4   | 15,559                                    | 160  | 58                    | 281   | 16,058 |
| 3.0   | 1,318.4   | 80.5   | 28.9   | 22,244                                    | 160  | 58                    | 333   | 22,795 |

<sup>a/</sup> Assumes Army accounts for 75 percent of DOD strength increase.

<sup>b/</sup> Quality mix of all accessions held constant.

<sup>c/</sup> Assumes marginal training cost of \$1,000 per accession.

Table 2.7

COST OF INCREASING ARMY STRENGTHS IN AVF WHILE MAINTAINING QUALITY:  
INCREASED RECRUITING AND ADVERTISING

| DOD END<br>STRENGTH<br>a/<br>(millions) | ARMY<br>ENLISTED<br>END STRENGTH<br>(thousands) | QUALITY NPS <sup>b/</sup><br>ACCESSIONS<br>(thousands) |        | Costs (millions of constant FY78 dollars) |  |                       |     | VARIABLE<br>TRAINING<br>c/<br>COSTS | TOTAL |
|---|---|--|--------|---|--|-----------------------|-----|-------------------------------------|-------|
|   |   | MALE   | FEMALE | ENLISTED<br>BASE PAY<br>AND<br>ALLOWANCES | VARIABLE<br>RECRUITING<br>AND<br>ADVERTISING | ENLISTMENT<br>BONUSES |     |                                     |       |
|   |   |  |        |   |  |                       |     |                                     |       |
| 2.1                                     | 684.7   | 41.8   | 15.0   | 5,792                                     | 160  | 58                    | 173 | 6,183                               |       |
| 2.3                                     | 837.6   | 51.2   | 18.3   | 7,085                                     | 228  | 58                    | 211 | 7,582                               |       |
| 2.5                                     | 975.0   | 59.6   | 21.3   | 8,248                                     | 296  | 58                    | 246 | 8,848                               |       |
| 2.7                                     | 1,112.3   | 67.9   | 24.4   | 9,409                                     | 371  | 58                    | 281 | 10,119                              |       |
| 3.0                                     | 1,318.4   | 80.5   | 28.9   | 11,152                                    | 498  | 58                    | 333 | 12,041                              |       |

<sup>a/</sup> Assumes Army accounts for 75 percent of DOD strength increase.

<sup>b/</sup> Quality mix of all accessions held constant.

<sup>c/</sup> Assumes marginal training cost of \$1,000 per accession.

The sensitivity of costs to the functional forms of the model for the effect of recruiting and advertising is addressed in Appendix A. Reasonable alternative models would add at most \$100 million to the estimated cost increase in recruiting and advertising required to increase Army strengths up to about 50 percent.

Alternative: Increasing Enlistment Bonuses. Under this alternative, increases in quality male accessions are obtained by increasing the enlistment bonus budget while holding pay rates as well as recruiting and advertising expenditures constant. The effects of enlistment bonuses were addressed in Ref 1. Analysis pertaining to that study indicated that \$1 million allocated to enlistment bonuses produces 104 quality male accessions not otherwise available. In addition, a sufficient number of quality males who would have chosen a 3-year option enlist for 4 years so that the additional service years obtained from these men reduces the requirement for quality accessions by 45.

If the additional quality requirements associated with increased force levels are to be met through payment of enlistment bonuses, the amount of these bonuses may be calculated as in the following example:

|   |                     |                |
|---|---------------------|----------------|
| Desired Army quality male accessions:                       | 51,200 <sup>*</sup> |                |
| Baseline quality accessions (FY78):                         | 41,800              |                |
| Increment to be procured through bonuses:                   | 9,400               |                |
| Incremental bonus expenditure required:                     |                     | \$63.1 million |
| Corresponding procurement:                                  |                     |                |
| Quality accessions:   | 6,561               |                |
| Quality requirement reduction:                              | 2,839               |                |
| Reduced training costs:                                     |                     | - 2.8 million  |
| Incremental recruiting and advertising expenditure avoided: |                     | -68.0 million  |
| Net savings vice recruiting and advertising alternative:    |                     | \$7.7 million  |

The results of the enlistment bonus calculations are shown for the end strengths considered under the AVF analysis in Table 2.8.

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\* Not considering enlistment bonuses and the associated increase in man-years per accession. The desired quality male accessions correspond to the AVF requirements for a DOD strength of 2.3 million as shown in Table 2.2.

Table 2.8

COST OF INCREASING ARMY STRENGTHS IN AVF WHILE MAINTAINING QUALITY:  
MORE ENLISTMENT BONUSES

| DOD END<br>STRENGTH<br>a/<br>(millions) | ARMY<br>ENLISTED<br>END STRENGTH<br>(thousands) | Costs (millions of constant FY78 dollars)      |        |   |  |                       |                                     |        |
|---|---|--|--------|---|--|-----------------------|-------------------------------------|--------|
|   |   | QUALITY NPS<br>b/<br>ACCESSIONS<br>(thousands) |        | ENLISTED<br>BASE PAY<br>AND<br>ALLOWANCES | VARIABLE<br>RECRUITING<br>AND<br>ADVERTISING | ENLISTMENT<br>BONUSES | VARIABLE<br>TRAINING<br>c/<br>COSTS | TOTAL  |
|   |   | MALE   | FEMALE |   |  |                       |                                     |        |
|   |   |  |        |   |  |                       |                                     |        |
| 2.1                                     | 684.7   | 41.8   | 15.0   | 5,792                                     | 160  | 56                    | 173                                 | 6,183  |
| 2.3                                     | 837.6   | 48.4   | 18.3   | 7,085                                     | 160  | 121                   | 209                                 | 7,575  |
| 2.5                                     | 975.0   | 54.2   | 21.3   | 8,248                                     | 160  | 177                   | 241                                 | 8,826  |
| 2.7                                     | 1,112.3   | 60.0   | 24.4   | 9,409                                     | 160  | 233                   | 273                                 | 10,075 |
| 3.0                                     | 1,318.4   | 68.8   | 28.9   | 11,152                                    | 160  | 318                   | 321                                 | 11,951 |

<sup>a/</sup> Assumes Army accounts for 75 percent of DOD strength increase.

<sup>b/</sup> Quality mix of all accessions held constant.

<sup>c/</sup> Assumes marginal training cost of \$1,000 per accession.

Alternative: Increasing Quality Women. One alternative for maintaining the quality level in the force is to increase the number of quality female accessions. Currently, more quality women are applying for military service than the Army is willing to accept. Thus, at current demand levels, women are not supply limited and nothing is known about the extent to which more quality female accessions can be had merely by relaxing the demand limitation.

In order to present a "pure strategy", Table 2.9 displays the cost of increasing Army AVF strengths by meeting increased quality requirements with quality women. Since quality women are not considered to be supply limited no additional procurement cost is shown for increasing their numbers. Since a no-cost assumption is clearly unrealistic for large increases in strengths, the costs shown in the table can be viewed as lower bounds on the costs of maintaining the indicated force sizes (perhaps resulting from a lowering of the quality requirement).

Summary. The results of the calculations concerning the costs of maintaining Army end strengths under the AVF are summarized in Table 2.10 and shown graphically in Figure 2.1.

As can be seen, the pay account overwhelms the other accounts. Differences in costs due to increases in recruiting and advertising or enlistment bonuses or simply making up shortfalls in male quality volunteers with quality females are virtually indistinguishable at this level of aggregation. The analysis shows that more funds for enlistment bonuses would be slightly more effective than more funds for recruiting and advertising. It is very clear, however, that general pay increases as a means of increasing the supply of quality volunteers are extremely expensive. In fact, the relative pay elasticity would have to be at least 30.0 for general percentage pay increases or 25.0 for constant increment pay increases to be as cost-effective as increases in recruiting or more target-directed differential pay systems such as enlistment bonuses. It is noted that the required pay elasticity is an order of magnitude greater than the largest elasticity obtained in any of the referenced analyses of this supply group.

#### Costs to Support Larger DOD End Strengths with a Draft

As noted previously, a draft environment differs from an AVF environment in several potentially significant ways. One naturally expects cost savings in recruiting, advertising and enlistment bonuses. Countering these

COST OF INCREASING ARMY STRENGTHS IN AVF:  
MORE QUALITY WOMEN

c/ Assumes marginal training cost of \$1,000 per accession.

Table 2.10

SUMMARY COMPARISON OF ALTERNATIVE WAYS TO  
INCREASE ARMY STRENGTH WITHOUT A DRAFT

| DOD End<br>Strength<br>(millions) | Army Enlisted<br>End Strength<br>(thousands) | Total cost <sup>a/</sup> (billions of constant FY78 dollars)   |   |   |                               |                          |
|-----------------------------------|--|--|---|---|-------------------------------|--------------------------|
|                                   |  | Increased<br>Pay and<br>Allowances<br>(Constant<br>percentage) | Increased<br>Pay and<br>Allowances<br>(Constant<br>increment) | Increased<br>Recruiting<br>and<br>Advertising | More<br>Enlistment<br>Bonuses | More<br>Quality<br>Women |
| 2.1                               | 685  | 6.2  | 6.2   | 6.2   | 6.2                           | 6.2                      |
| 2.3                               | 838  | 9.6  | 9.1   | 7.6   | 7.6                           | 7.5                      |
| 2.5                               | 975  | 13.3   | 12.3  | 8.8   | 8.8                           | 8.7                      |
| 2.7                               | 1,112  | 17.8   | 16.1  | 10.1  | 10.1                          | 9.9                      |
| 3.0                               | 1,318  | 25.9   | 22.8  | 12.0  | 12.0                          | 11.7                     |

<sup>a/</sup> Consists of enlisted pay and allowances, variable recruiting, advertising, enlistment bonuses, and variable Army training.



Cost of maintaining  
Army end strengths

Pay plus quality procurement  
expenditures (\$ billions)

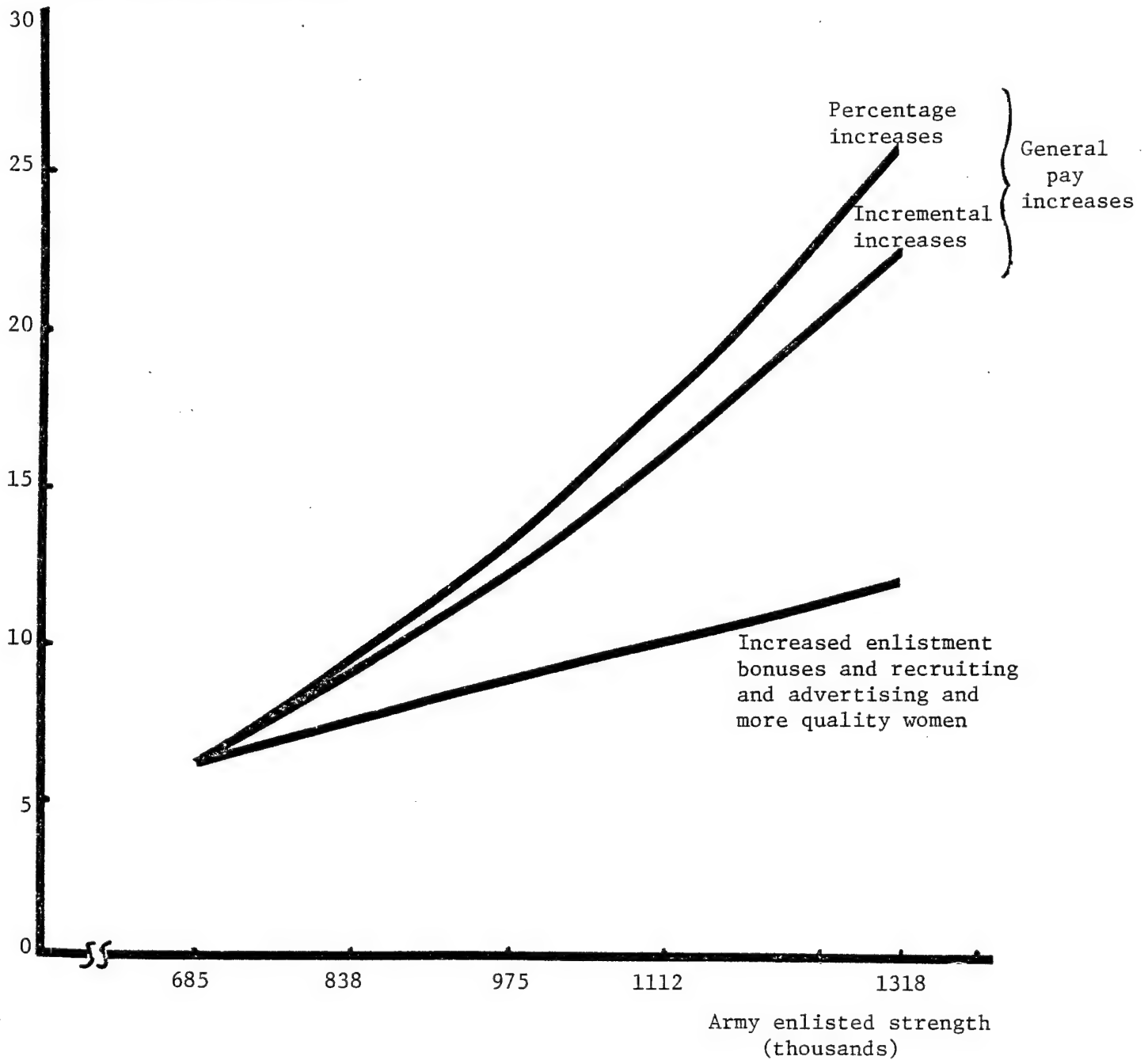


Fig. 2.1—Pay Plus Expenditures to Maintain Current  
Quality With Increases in Army Enlisted Strength  
Under Various Policy Options

savings are increased training costs for the Army because of the shorter average terms of service of the draftees (see Table 2.1). The operation costs of the Selective Service System (not estimated here) would further reduce the savings.

Three accession procurement options will be considered:

- AVF: In this case, the AVF concept is operating. The proportion of quality accessions and the fraction of the Army enlisted end strength represented by Army first-term reenlistments are maintained at FY78 levels. Additional quality enlistees required to increase strengths are obtained through increased recruiting and advertising.

- Draft: Reenlistments Proportioned to Strengths. In this case, the draft is operating and, as in the AVF case, the fraction of the Army enlisted end strength represented by Army first-term reenlistments is constrained to FY78 levels.

- Draft: Reenlistments Fixed. In this case, the draft is operating and the Army first-term reenlistment objective is fixed at 30,000.

Recruiting and advertising costs for each Service corresponding to the quality accession requirements of Table 2.2 are shown in Tables 2.11-2.13 for the three cases. DOD acquisition and compensation costs for maintaining enlisted end strengths in each of the accession procurement options are shown in Tables 2.14-2.16. These costs reflect the requirement for the volunteer quality males shown in Table 2.2.

Aggregate DOD cost figures for the three options are summarized in Table 2.17 and shown graphically in Figure 2.2.

It is seen in the summary table that even for Draft Case 2, a savings of only \$200-\$500 million is expected, depending on the end strength required. This result assumes no changes in basic pay and allowances in a draft environment.

#### EFFECTS OF DECLINING POPULATION ON THE SUPPLY OF QUALITY VOLUNTEERS

As the 17-21-year-old male population declines over the next decade, the recruiting pool for quality males will undergo a corresponding decline.

Table 2.11

## RECRUITING AND ADVERTISING COSTS BY SERVICE: AVF

| DOD End Strength (millions) | Total Army Accessions (thousands) | Quality Male NPS Accessions (thousands) |      |      |      | Recruiting & Advertising Budgets (millions of FY78 dollars) |      |      |      | TOTAL |
|-----------------------------|-----------------------------------|---|------|------|------|---|------|------|------|-------|
|                             |                                   | Army                                    | Navy | USMC | USAF | Army  | Navy | USMC | USAF |       |
| 2.1                         | 684.7                             | 41.8                                    | 44.7 | 18.9 | 46.2 | 160   | 88.7 | 50.7 | 40.4 | 339.8 |
| 2.3                         | 837.6                             | 51.2                                    | 44.7 | 18.9 | 50.4 | 228   | 88.7 | 50.7 | 44.1 | 411.5 |
| 2.5                         | 975.0                             | 59.6                                    | 44.7 | 18.9 | 54.6 | 296   | 88.7 | 50.7 | 47.8 | 483.2 |
| 2.7                         | 1,112.3                           | 67.9                                    | 44.7 | 18.9 | 58.8 | 371   | 88.7 | 50.7 | 51.5 | 561.9 |
| 3.0                         | 1,318.4                           | 80.5                                    | 44.7 | 18.9 | 65.1 | 498   | 88.7 | 50.7 | 57.0 | 694.4 |

Table 2.12

RECRUITING AND ADVERTISING COSTS BY SERVICE:  
DRAFT WITH FIRST-TERM REENLISTMENT'S PROPORTIONAL TO STRENGTH

| DOD End<br>Strength<br>(millions) | Total<br>Army<br>Accessions<br>(thousands) | Quality Male NPS Accessions<br>(thousands) |      |      |      | Recruiting & Advertising Budgets<br>(millions of FY78 dollars) |      |      |      |       |
|-----------------------------------|--|--|------|------|------|--|------|------|------|-------|
|                                   |  | Army                                       | Navy | USMC | USAF | Army   | Navy | USMC | USAF | TOTAL |
| 2.1                               | 684.7                                      | 36.8                                       | 43.5 | 18.6 | 44.5 | 128.4  | 85.7 | 48.5 | 38.9 | 301.5 |
| 2.3                               | 837.6                                      | 45.0                                       | 43.2 | 18.5 | 48.4 | 182.0  | 84.9 | 47.8 | 42.4 | 357.1 |
| 2.5                               | 975.0                                      | 52.4                                       | 42.9 | 18.5 | 52.2 | 236.8  | 84.2 | 47.8 | 45.7 | 414.5 |
| 2.7                               | 1,112.3                                    | 59.8                                       | 42.7 | 18.4 | 56.1 | 297.7  | 83.7 | 47.2 | 49.1 | 477.7 |
| 3.0                               | 1,318.4                                    | 70.9                                       | 42.3 | 18.3 | 61.9 | 399.8  | 82.7 | 46.5 | 54.2 | 583.2 |

Table 2.13

RECRUITING AND ADVERTISING COSTS BY SERVICE:  
DRAFT WITH FIRST TERM REENLISTMENTS AT FY78 LEVELS

| DOD End<br>Strength<br>(millions) | Total<br>Army<br>Accessions<br>(thousands) | Quality Male NPS Accessions<br>(thousands) |      |      |      | Recruiting & Advertising Budgets<br>(millions of FY78 dollars) |      |      |      | TOTAL |
|-----------------------------------|--|--|------|------|------|--|------|------|------|-------|
|                                   |  | Army                                       | Navy | USMC | USAF | Army   | Navy | USMC | USAF |       |
| 2.1                               | 684.7                                      | 20.0                                       | 39.7 | 17.7 | 39.4 | -0-  | 76.4 | 42.5 | 34.5 | 153.4 |
| 2.3                               | 837.6                                      | 20.0                                       | 36.6 | 17.0 | 39.4 | -0-  | 68.9 | 38.1 | 34.5 | 141.5 |
| 2.5                               | 975.0                                      | 20.0                                       | 33.8 | 16.4 | 39.9 | -0-  | 62.3 | 34.6 | 34.9 | 131.8 |
| 2.7                               | 1,112.3                                    | 20.0                                       | 31.0 | 15.7 | 40.4 | -0-  | 55.9 | 30.8 | 35.4 | 122.1 |
| 3.0                               | 1,318.4                                    | 20.0                                       | 26.8 | 14.8 | 41.0 | -0-  | 46.5 | 26.3 | 35.9 | 108.7 |

Table 2.14

COST OF INCREASING DOD END STRENGTHS:  
AVF

| Total<br>DOD End<br>Strength<br>(millions) | DOD<br>Enlisted<br>End Strength<br>(thousands) | Costs (millions of FY78 dollars) |                                  |                              |                                       | Total  |
|--|--|----------------------------------|----------------------------------|------------------------------|---------------------------------------|--------|
|  |  | DOD Pay<br>and<br>Allowances     | Recruiting<br>and<br>Advertising | DOD<br>Enlistment<br>Bonuses | Variable<br>Army<br>Training<br>Costs |        |
| 2.1  | 1,812  | 15,328                           | 340                              | 58                           | 173                                   | 15,899 |
| 2.3  | 1,996  | 16,884                           | 412                              | 58                           | 211                                   | 17,565 |
| 2.5  | 2,180  | 18,441                           | 483                              | 58                           | 246                                   | 19,228 |
| 2.7  | 2,364  | 19,997                           | 562                              | 58                           | 281                                   | 20,898 |
| 3.0  | 2,641  | 22,340                           | 694                              | 58                           | 333                                   | 23,425 |

Table 2.15

COST OF INCREASING DOD END STRENGTHS:  
DRAFT — FIRST-TERM  
REENLISTMENTS PROPORTIONAL TO STRENGTHS

| Total<br>DOD End<br>Strength<br>(millions) | DOD<br>Enlisted<br>End Strength<br>(thousands) | Costs (millions of FY78 dollars) |                                  |                              |                                       | Total  |
|--|--|----------------------------------|----------------------------------|------------------------------|---------------------------------------|--------|
|  |  | DOD Pay<br>and<br>Allowances     | Recruiting<br>and<br>Advertising | DOD<br>Enlistment<br>Bonuses | Variable<br>Army<br>Training<br>Costs |        |
| 2.1  | 1,812  | 15,328                           | 302                              | -0-                          | 173                                   | 15,803 |
| 2.3  | 1,996  | 16,884                           | 357                              | -0-                          | 211                                   | 17,452 |
| 2.5  | 2,180  | 18,441                           | 415                              | -0-                          | 246                                   | 19,102 |
| 2.7  | 2,364  | 19,997                           | 478                              | -0-                          | 281                                   | 20,756 |
| 3.0  | 2,641  | 22,340                           | 583                              | -0-                          | 333                                   | 23,256 |

Table 2.16

COST OF INCREASING DOD END STRENGTHS:  
DRAFT -- FIRST-TERM  
REENLISTMENTS AT FY78 LEVELS

| Total<br>DOD End<br>Strength<br>(millions) | DOD<br>Enlisted<br>End Strength<br>(thousands) | Costs (millions of FY78 dollars) |                                  |                              |                                       | Total  |
|--|--|----------------------------------|----------------------------------|------------------------------|---------------------------------------|--------|
|  |  | DOD Pay<br>and<br>Allowances     | Recruiting<br>and<br>Advertising | DOD<br>Enlistment<br>Bonuses | Variable<br>Army<br>Training<br>Costs |        |
| 2.1  | 1,812  | 15,328                           | 153                              | -0-                          | 190                                   | 15,671 |
| 2.3  | 1,996  | 16,884                           | 142                              | -0-                          | 242                                   | 17,268 |
| 2.5  | 2,180  | 18,441                           | 132                              | -0-                          | 288                                   | 18,861 |
| 2.7  | 2,364  | 19,997                           | 122                              | -0-                          | 334                                   | 20,453 |
| 3.0  | 2,641  | 22,340                           | 109                              | -0-                          | 404                                   | 22,852 |



Table 2.17

SUMMARY COMPARISON OF COSTS THAT DIFFER  
BETWEEN AVF AND DRAFT

| Total<br>DOD End<br>Strength<br>(millions) | Total cost <sup>a/</sup> (billions of constant FY78 dollars) |  |  |  |
|--|--|--|--|--|
|  | AVF  | Draft<br>Reenlistments<br>Proportional to Strength | Draft<br>Reenlistments<br>at FY78 Levels |  |
| 2.1  | 15.9   | 15.8   | 15.7                                     |  |
| 2.3  | 17.6   | 17.5   | 17.3                                     |  |
| 2.5  | 19.2   | 19.1   | 18.9                                     |  |
| 2.7  | 20.9   | 20.8   | 20.5                                     |  |
| 3.0  | 23.4   | 23.3   | 22.9                                     |  |

<sup>a/</sup> The following costs are considered:

- Enlisted pay and allowances
- Recruiting (variable costs only)
- Advertising
- Enlistment bonuses
- Army training costs (variable costs only)

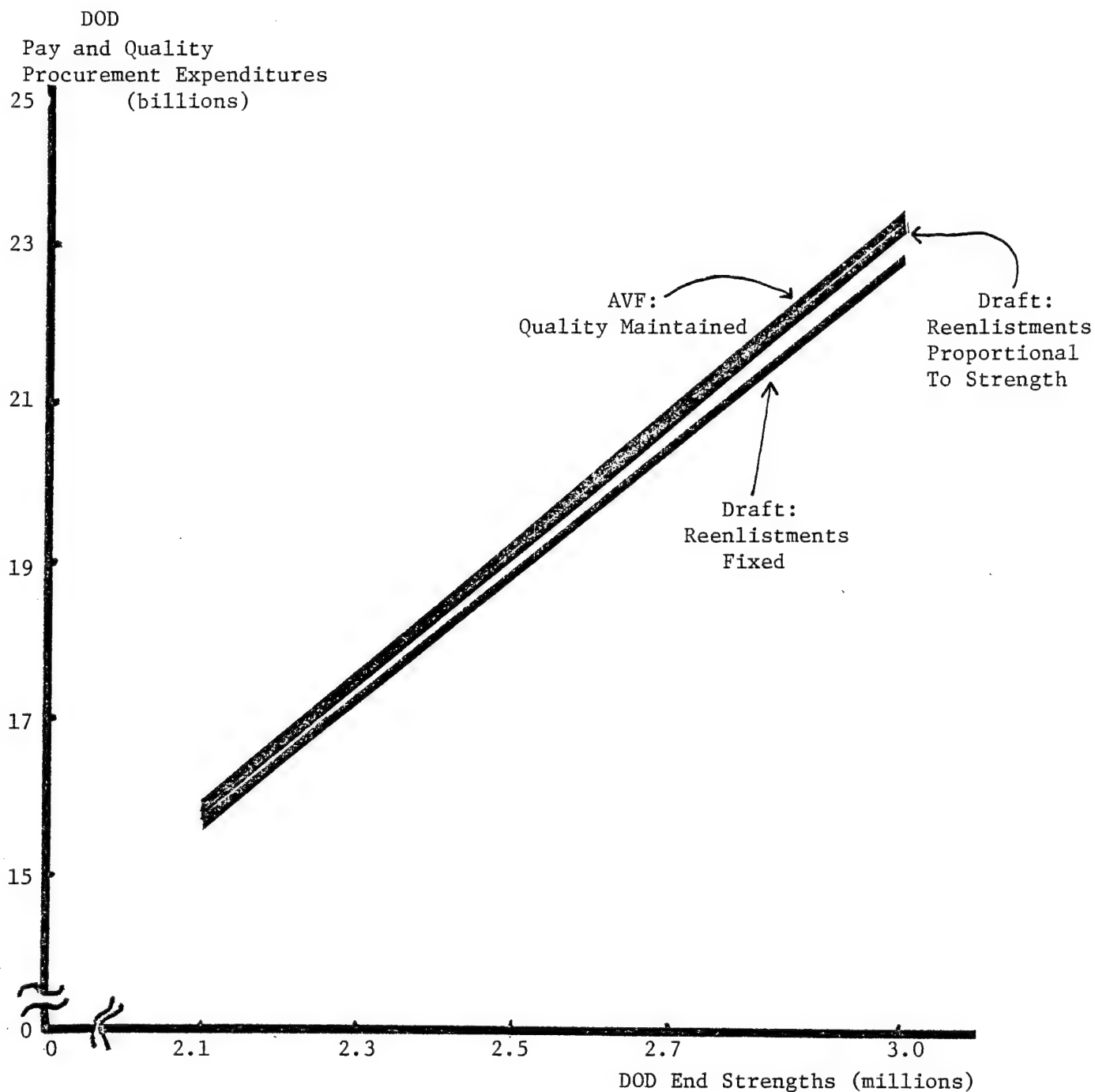


Fig. 2.2—Pay Plus Quality Procurement Costs of Increasing DOD End Strengths Under Various Policy Options

Tables 2.18 through 2.22 show the costs of increasing strengths in the face of a 15 percent population decline<sup>\*</sup> by increasing pay, recruiting and advertising, enlistment bonuses, or accessions of quality women. Although the costs of all options are now slightly higher than they were without the population decline (compare with Tables 2.5 through 2.9), the relative costs of the options remains essentially the same.

#### IMPACT OF THE DRAFT ON REENLISTMENT BONUS COSTS

One cost element not included in the preceding is reenlistment bonuses. In the AVF and Draft Case 1, reenlistment bonus costs for the Army would change in proportion to the change in the first-term reenlistment objective, which, for a given strength, is the same for the two cases. In the draft, small increases in reenlistment bonus costs (a few million dollars at most) would probably be required for the other Services to counter the slightly reduced average reenlistment propensities caused by the presence of draft-motivated volunteers, whose reenlistment propensities would be expected to be lower than the propensities of true volunteers, as is the case for the Army.

In Draft Case 2, Army first-term reenlistments are held to 30,000 at all end strengths. This results in reenlistment bonus cost savings for the Army of \$13 million relative to the AVF at a DOD strength of 2.3 million and a savings of \$75 million at a DOD strength of 3.0 million. These savings would probably be almost completely offset by increases in reenlistment bonus costs for the other Services because of the substantial numbers of draft-motivated enlistees they will be taking with low reenlistment propensities. The other Services do, of course, have the option of maintaining their recruiting efforts at current levels to ensure an adequate supply of higher reenlistment propensity volunteers. The average quality of their first-term forces would also rise if this is done. It is not clear, at this point, whether increasing reenlistment bonuses or recruiting would be more cost-effective in supporting the other Services' reenlistment requirements. The net effect in Draft Case 2 increased costs for the other Services and reduced costs for the Army (relative to the draft) is to change relative draft costs by a negligible amount.

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<sup>\*</sup>This decline represents the FY85 population decline from FY78 levels (Ref 4).

Table 2.18

MAINTAINING ARMY STRENGTHS WITH QMA DECLINE:  
CONSTANT PERCENTAGE INCREASE IN PAY AND ALLOWANCES ACROSS ALL ENLISTED GRADES

| DOD END<br>STRENGTH <sup>a/</sup><br>(millions) | ARMY<br>ENLISTED<br>END STRENGTH<br>(thousands) | QUALITY NPS <sup>b/</sup><br>ACCESSIONS<br>(thousands) |        | Costs (millions of constant FY78 dollars) |  |                       |   |        | TOTAL |
|---|---|--|--------|---|--|-----------------------|---|--------|-------|
|   |   | MALE   | FEMALE | ENLISTED<br>BASE PAY<br>AND<br>ALLOWANCES | VARIABLE<br>RECRUITING<br>AND<br>ADVERTISING | ENLISTMENT<br>BONUSES | VARIABLE<br>TRAINING <sup>c/</sup><br>COSTS |        |       |
|   |   |  |        |   |  |                       |   |        |       |
| 2.1   | 684.7   | 41.8   | 15.0   | 6,256                                     | 160  | 58                    | 173   | 6,647  |       |
| 2.3   | 837.6   | 51.2   | 18.3   | 9,862                                     | 160  | 58                    | 211   | 10,291 |       |
| 2.5   | 975.0   | 59.6   | 21.3   | 13,880                                    | 160  | 58                    | 246   | 14,344 |       |
| 2.7   | 1,112.3   | 67.9   | 24.4   | 18,637                                    | 160  | 58                    | 281   | 19,136 |       |
| 3.0   | 1,318.4   | 80.5   | 28.9   | 27,329                                    | 160  | 58                    | 333   | 27,880 |       |

<sup>a/</sup> Assumes Army accounts for 75 percent of DOD strength increase.

<sup>b/</sup> Quality mix of all accessions held constant.

<sup>c/</sup> Assumes marginal training cost of \$1,000 per accession.

MAINTAINING ARMY STRENGTHS WITH QMA DECLINE:  
CONSTANT INCREMENT IN PAY AND ALLOWANCES ACROSS ALL ENLISTED GRADES

| DOD END<br>STRENGTH<br>(millions) | ARMY<br>ENLISTED<br>END STRENGTH<br>(thousands) | QUALITY NPS <sub>b</sub> /<br>ACCESSIONS<br>(thousands) |        | Costs (millions of constant FY78 dollars) |  |                       |  |        | TOTAL |
|-----------------------------------|---|---|--------|---|--|-----------------------|--|--------|-------|
|                                   |   | MALE  | FEMALE | ENLISTED<br>BASE PAY<br>AND<br>ALLOWANCES | VARIABLE<br>RECRUITING<br>AND<br>ADVERTISING | ENLISTMENT<br>BONUSES | VARIABLE<br>TRAINING <sub>c</sub> /<br>COSTS |        |       |
|                                   |   |   |        |   |  |                       |  |        |       |
| 2.1                               | 684.7   | 41.8  | 15.0   | 6,156                                     | 160  | 58                    | 173  | 6,547  |       |
| 2.3                               | 837.6   | 51.2  | 18.3   | 9,262                                     | 160  | 58                    | 211  | 9,691  |       |
| 2.5                               | 975.0   | 59.6  | 21.3   | 12,663                                    | 160  | 58                    | 246  | 13,127 |       |
| 2.7                               | 1,112.3   | 67.9  | 24.4   | 16,643                                    | 160  | 58                    | 281  | 17,143 |       |
| 3.0                               | 1,318.4   | 80.5  | 28.9   | 23,833                                    | 160  | 58                    | 333  | 24,384 |       |

a/ Assumes Army accounts for 75 percent of DOD strength increase.

b/ Quality mix of all accessions held constant.

c/ Assumes marginal training cost of \$1,000 per accession.

Table 2.20

MAINTAINING ARMY STRENGTHS WITH QMA DECLINE:  
INCREASED RECRUITING AND ADVERTISING

| DOD END<br>STRENGTH<br>a/<br>(millions) | ARMY<br>ENLISTED<br>END STRENGTH<br>(thousands) | Costs (millions of constant FY78 dollars)    |        |   |  |                       |                                     |        |
|---|---|--|--------|---|--|-----------------------|-------------------------------------|--------|
|   |   | QUALITY NPS,<br>ACCESSIONS b/<br>(thousands) |        | ENLISTED<br>BASE PAY<br>AND<br>ALLOWANCES | VARIABLE<br>RECRUITING<br>AND<br>ADVERTISING | ENLISTMENT<br>BONUSES | VARIABLE<br>TRAINING<br>c/<br>COSTS | TOTAL  |
|   |   | MALE   | FEMALE |   |  |                       |                                     |        |
|   |   |  |        |   |  |                       |                                     |        |
| 2.1                                     | 684.7   | 41.8   | 15.0   | 5,792                                     | 191  | 58                    | 173                                 | 6,214  |
| 2.3                                     | 837.6   | 51.2   | 18.3   | 7,085                                     | 272  | 58                    | 211                                 | 7,626  |
| 2.5                                     | 975.0   | 59.6   | 21.3   | 8,248                                     | 353  | 58                    | 246                                 | 8,905  |
| 2.7                                     | 1,112.3   | 67.9   | 24.4   | 9,409                                     | 442  | 58                    | 281                                 | 10,190 |
| 3.0                                     | 1,318.4   | 80.5   | 28.9   | 11,152                                    | 594  | 58                    | 333                                 | 12,137 |

<sup>a/</sup> Assumes Army accounts for 75 percent of DOD strength increase.

<sup>b/</sup> Quality mix of all accessions held constant.

<sup>c/</sup> Assumes marginal training cost of \$1,000 per accession.

Table 2.21

MAINTAINING ARMY STRENGTHS WITH QMA DECLINE:  
MORE ENLISTMENT BONUSES

| DOD END<br>STRENGTH<br>(millions) <sup>a/</sup> | ARMY<br>ENLISTED<br>END STRENGTH<br>(thousands) | QUALITY NPS <sup>b/</sup><br>ACCESSIONS |                       | Costs (millions of constant FY78 dollars) |  |                       |   | TOTAL  |
|---|---|---|-----------------------|---|--|-----------------------|---|--------|
|   |   | (thousands)<br>MALE                     | (thousands)<br>FEMALE | ENLISTED<br>BASE PAY<br>AND<br>ALLOWANCES | VARIABLE<br>RECRUITING<br>AND<br>ADVERTISING | ENLISTMENT<br>BONUSES | VARIABLE<br>TRAINING<br>COSTS <sup>c/</sup> |        |
|   |   |   |                       |   |  |                       |   |        |
| 2.1   | 684.7   | 41.0                                    | 15.0                  | 5,792                                     | 160  | 75                    | 172   | 6,199  |
| 2.3   | 837.6   | 47.6                                    | 18.3                  | 7,085                                     | 160  | 138                   | 208   | 7,591  |
| 2.5   | 975.0   | 53.5                                    | 21.3                  | 8,248                                     | 160  | 194                   | 240   | 8,842  |
| 2.7   | 1,112.3   | 59.3                                    | 24.4                  | 9,409                                     | 160  | 250                   | 272   | 10,091 |
| 3.0   | 1,318.4   | 68.1                                    | 28.9                  | 11,152                                    | 160  | 335                   | 320   | 11,967 |

<sup>a/</sup> Assumes Army accounts for 75 percent of DOD strength increase.

<sup>b/</sup> Quality mix of all accessions held constant.

<sup>c/</sup> Assumes marginal training cost of \$1,000 per accession.

Table 2.22

MAINTAINING ARMY STRENGTHS WITH QMA DECLINE:  
MORE QUALITY WOMEN

| DOD END<br>STRENGTH <sup>a/</sup><br>(millions) | ARMY<br>ENLISTED<br>END STRENGTH<br>(thousands) | QUALITY NPS <sup>b/</sup><br>ACCESSIONS<br>(thousands) |        | Costs (millions of constant FY78 dollars) |  |                       |   |        | TOTAL |
|---|---|--|--------|---|--|-----------------------|---|--------|-------|
|   |   | MALE   | FEMALE | ENLISTED<br>BASE PAY<br>AND<br>ALLOWANCES | VARIABLE<br>RECRUITING<br>AND<br>ADVERTISING | ENLISTMENT<br>BONUSES | VARIABLE<br>TRAINING<br>COSTS <sup>c/</sup> |        |       |
|   |   |  |        |   |  |                       |   |        |       |
| 2.1   | 684.7   | 37.7   | 19.1   | 5,792                                     | 160  | 58                    | 173   | 6,183  |       |
| 2.3   | 837.6   | 37.7   | 31.8   | 7,085                                     | 160  | 58                    | 211   | 7,514  |       |
| 2.5   | 975.0   | 37.7   | 43.2   | 8,248                                     | 160  | 58                    | 246   | 8,712  |       |
| 2.7   | 1,112.3   | 37.7   | 54.6   | 9,409                                     | 160  | 58                    | 281   | 9,908  |       |
| 3.0   | 1,318.4   | 37.7   | 71.7   | 11,152                                    | 160  | 58                    | 333   | 11,703 |       |

<sup>a/</sup> Assumes Army accounts for 75 percent of DOD strength increase.

<sup>b/</sup> Quality mix of all accessions held constant.

<sup>c/</sup> Assumes marginal training cost of \$1,000 per accession.



### 3. ALTERNATIVE COMPENSATION POLICIES IN PEACE AND WAR

#### INTRODUCTION

The preceding chapter addressed the cost implications of AVF/draft alternatives at various military force levels. This chapter supports Commission deliberations on forms of military compensation for peace and war by estimating the total active military personnel costs of alternative compensation policies over a range of force scenarios.

#### The Need to Consider Alternatives

There is general agreement that the fundamental objective of our military compensation system is to attract and retain the quantity and quality of personnel needed to meet our national defense requirements. In theory, when we rely on an AVF, compensation at a lower rate than necessary to meet this objective would result in erosion of our defense posture. Compensation at a higher rate could either erode defense posture (by forcing compensating reductions in defense investment) or divert national resources from non-defense applications of potentially greater benefit to society. In practice, of course, the complexities of the military institution with its "closed" personnel system, multiplicity of pay components and options, and mix of fringe benefits, make precise determination of theoretically optimum pay levels an impossibility. Changing states of the world, changing national attitudes, and the possible impact of a draft further complicate the determination of appropriate compensation policies. For these reasons, one approach is to consider a range of alternatives and evaluate their costs under various potential geopolitical situations in lieu of attempting a single optimization based on a set of what would be, at best, highly uncertain assumptions.

The material presented in this chapter is intended to aid the formulation of military compensation policy by permitting the costs of various policies to be compared under a range of world conditions. Choices can then be considered by judging the likelihood of these conditions and by

balancing costs/savings against such intangible factors as equity, public response, and military institutional needs.

#### Detail Presented

The next section will define the compensation alternatives and illustrative scenarios used for cost development. This is followed by an explanation of techniques applied to develop officer/enlisted mixes, grade structures and other force characteristics used as a basis for pricing and by discussion and illustration of the pricing methodology itself. The results themselves appear in tabular form and are treated only briefly in accompanying narrative. For reasons suggested above, conclusions as to policy implications are left to the reader.

#### COMPENSATION ALTERNATIVES AND FORCE SCENARIOS

Compensation policies and force scenarios have been chosen to present a range of cost options which depart from current levels and move in logical increments to what, for the foreseeable future, represent probable\* lower bounds on compensation rates and upper bounds on force levels. While an infinite number of illustrative combinations could have been presented, the six compensation options and six force mixes addressed below should offer sufficient variety for informed policy evaluation while keeping detail within manageable limits.

#### Compensation Alternatives Selected

The six compensation options used for price-out of active military personnel appropriation costs in this chapter are:

- Current FY 1978 pay rates and policies (baseline).
- Salary based on regular military compensation (RMC) at FY 1978 rates.
- Pay and allowances for grades E1/E2 at Federal minimum wage.
- Pay for E1/E2 at poverty level (allowances extra).
- Pay and allowances for E1/E2 at poverty level.
- Pay for E1/E2 at real (constant dollar) Korean war (1952) rates (current allowances extra).

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\* Current social policy probably precludes pay options below those considered here, while constraints on the processes of acquiring personnel probably preclude force levels much above those considered.

All alternatives are assumed to be priced in constant FY 1978 dollars. Discussion of each option follows.

Current Pay Rates. Current FY 1978 pay rates and policies are used as the base case.

Salary. Pay and allowances for all grades are replaced with a salary equal (in the aggregate) to today's pay plus allowances for housing and subsistence and the tax liability on these currently tax-free allowances. These elements are commonly known as regular military compensation (RMC). All personnel having the same grade and year of service are assumed to receive the same salary. This option was selected as the upper-bound case since conversion of military compensation to a salary system based on RMC has, for some time, been under active consideration as a policy alternative. No higher option was selected because all current evidence suggests that present rates (which have, since 1972, been tied along with civil service compensation to the private sector) are adequate to attract and retain the required active personnel at current peacetime strengths. At higher strength levels, it is assumed that non-base-pay options (see Chapter 2) would be applied or a draft would be instituted before pay rates were increased relative to the private sector.

E1/E2 Pay and Allowances at Minimum Wage. All enlisted personnel in pay grades E1 and E2 are assumed to receive the January 1, 1978 Federal minimum wage of \$2.65 per hour and to be paid for a 40-hour week. No additional allowances are paid for housing and subsistence and the value of these allowances is deducted from base pay when quarters and subsistence are furnished in kind. Pay and allowances of all other enlisted personnel and of all officers remain at current levels.

This and the other options reducing pay of junior personnel would obviously have adverse effects on voluntary enlistment levels of the supply limited "quality" males. Unless other incentives were provided to mitigate this effect, the quality of the force would decline. This effect would be most serious in a peacetime AVF environment but would also occur under a peacetime or wartime draft. Reduced rates for higher pay grades, while workable in the short run under a draft, would in all likelihood have a serious long-term impact on career force retention. Neither of these effects is analyzed in this report.

Calculations show that if E1/E2 basic pay were set at the minimum wage and current allowances were paid additionally, total compensation would exceed current levels. For this reason, this pay option is not presented.

E1/E2 Pay at Poverty Level. All E1/E2 personnel are assumed to receive basic pay equal to the currently defined poverty income level. For computation purposes, all are treated as heads of households with number of dependents based on current actual proportions. Housing and subsistence furnished as allowances or in-kind are provided over and above basic pay. This option would compensate junior enlisted at a somewhat lower level than the preceding case; however, the same remarks as to feasibility would generally apply.

E1/E2 Pay and Allowances at Poverty Level. All E1/E2 receive basic pay equal to the poverty income level; however, quarters and subsistence are treated as in the minimum wage case (i.e., allowances not paid and value of in-kind deducted from base pay). This is the lowest-cost option considered in this analysis.

Korean War Pay Rates. All E1/E2 personnel are assumed to receive the same basic pay, in real terms (i.e., adjusted for inflation), as was paid during the Korean War (1952). Housing and subsistence are provided, at current rates, over and above basic pay.

#### Force Scenarios Selected

The six force scenarios used in combination with the compensation options discussed above relate to three general states of the world or states of readiness: peacetime, partial mobilization, and full mobilization. Partial mobilization is defined as the maximum force which the President can raise by calling up reserve forces without congressional declaration of state of emergency or war. Full mobilization assumes such a congressional declaration, reinstatement of the draft, and commitment of US forces abroad. Not considered was total mobilization, a currently unlikely state under which conventional warfare is pursued on a global basis and US states and territories are threatened by invasion. Within the first three states of the world, the six forces postulated are:

- Peacetime
  - FY 1978 authorized force levels (2.1 million)
  - An incremental buildup of 200,000
- Partial mobilization
  - Presidential call-up of 1 million Ready Reserves
- Full mobilization
  - 3.5 million mobilization, Vietnam peak force mix
  - 3.5 million mobilization, reserve recall
  - 4.5 million mobilization, reserve recall

In all cases, a static state is considered for comparative pricing purposes. Force levels are assumed to have been attained by the beginning of the year used for pricing and to remain constant throughout that year. The general scenarios which might pertain for each of these forces are illustrated below. This is followed by sections which describe assumptions and methodology used to determine force mixes and costs.

Peacetime: FY1978 Authorized Force Levels. This base case for all other force increase excursions is the DoD military strength included in the FY1978 President's Budget as adjusted by the Defense Appropriation Authorization Act for FY1978 (PL 95-79, July 30, 1977).<sup>\*</sup> In adjusting strengths as specified by the Act, all changes have been assumed to be in enlisted strength levels. Baseline strengths so derived are as follows:

|                          | <u>Army</u>    | <u>Navy</u>    | <u>Marines</u>    | <u>Air Force</u> | <u>Defense</u>   |
|--------------------------|----------------|----------------|-------------------|------------------|------------------|
| Officers                 | 97,996         | 62,973         | 18,552            | 94,923           | 274,444          |
| Enlisted                 | 684,704        | 468,477        | 172,948           | 471,571          | 1,797,700        |
| Cadets                   | <u>4,300</u>   | <u>4,350</u>   | <u>          </u> | <u>4,306</u>     | <u>12,956</u>    |
| Total active<br>Military | <u>787,000</u> | <u>535,800</u> | <u>191,500</u>    | <u>570,800</u>   | <u>2,085,100</u> |

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<sup>\*</sup> Current DOD plans, as reflected in the FY 1979 President's Budget, call for approximately 16,000 fewer military personnel in FY 1978 with further reductions in FY 1979. These reductions are largely in support areas and individuals accounts rather than in combat forces.

Peacetime: Incremental Buildup of 200,000. The first force increase excursion considered is one in which total active DOD strength is increased by 200,000, approximately 10 percent of the current level. One way such an increase might be structured would be an addition to NATO-committed Army division forces and Air Force tactical air forces. This could be apportioned 75 percent (150,000) to the Army and 25 percent (50,000) to the Air Force. Depending on a number of alternatives such as unit readiness levels and related increases in support and auxiliary forces, this might translate into an increase of approximately three to five divisions and seven to twelve tactical fighter wings. Overall component active military strengths would be:

|             |                  |
|-------------|------------------|
| <u>Army</u> | <u>Air Force</u> |
| 937,000     | 620,800          |

Partial Mobilization: Call-up of 1 Million Ready Reserves. As part of this study, statutory reserve force call-up authorities were researched and documented. A complete discussion of these authorities, together with extracts from applicable sections of the US Code, may be found at Appendix D, Statutory Authorities for Increasing Active Strengths. The maximum authority available to the President without Congressional declaration of war or emergency has been selected for illustrative costing. This is the authority granted under 10 USC 673 which, given a declaration of national emergency by the President, provides for involuntary call-up of up to 1 million members of the Ready Reserve for not more than 24 consecutive months.

Circumstances short of full mobilization under which the entire 1 million call-up authority might be exercised do not appear likely to arise, given today's geopolitical climate. Nevertheless, this option is considered because it represents a limiting case for reserve call-ups short of full mobilization.

Full Mobilization: 3.5 Million, Vietnam Peak Force Mix. This alternative was selected to illustrate the sensitivity of military personnel appropriation costs to changes in force composition (i.e., grade structure, longevity, marital status). The Vietnam peak of 3,470,000 in FY 1969 was the largest active military force maintained by the U.S. in recent times. The cost of this force, which was largely formed over a

4-year period by direct accessions into the active establishment, may be contrasted to the next case, a similarly sized force formed principally through reserve recall. Circumstances leading to reformation of such a force would be similar to those which brought about the Vietnam buildup. Given today's national attitudes, the recurrence of this type of situation in the near future is unlikely.

Full Mobilization: 3.5 Million, Reserve Recall. Current national security policy gives high priority to the defense of Western Europe and places primary reliance on reserve forces ("total force policy") to expand active ranks. This and the subsequent case represent two illustrative, arbitrary force levels which might be required in the event of the immediate threat of attack on Western Europe. Both assume activation of available reserves and reinstitution of the draft.

Full Mobilization: 4.5 Million, Reserve Recall. Assumptions for this case are, except for size of total buildup, identical to those set forth above. This is assumed to be the upper-bound case for full mobilization.

#### METHODOLOGY

This section summarizes the methodologies used to estimate force composition and costs for each compensation policy/scenario alternative. Details on composition and cost estimates may be found in Appendix C.

##### Estimation of Alternative Pay Rates

With the exception of the RMC calculation, only E1 and E2 pay rates required adjustment under the various compensation policy options. (Compensation of all other military personnel remains at current levels.) For cost estimation purposes, pay rates representing a composite of basic pay plus quarters and subsistence allowances have been derived for each alternative. For calculations under current pay policies and poverty level with allowances, weighted averages were developed using FY 1978 President's Budget assumptions as to proportions of E1/E2s receiving single- and married-rate quarters allowances. It was assumed that those receiving a basic allowance for quarters also received a basic allowance

for subsistence. The minimum wage rate is simply \$2.65 per hour times 40 hours per week times 52 weeks; it should be noted that payment of minimum wage plus allowances was not treated as an option since the weighted average rates would have exceeded today's composite rate (see Appendix C).

Poverty-level rates were based on the average 1976 Consumer Price Index determination and range from \$3069 for a single individual to \$6884 for a family of five. Distribution of E1 and E2 family size was considered to arrive at the weighted-average rate.

Korean War pay rates were converted to FY 1978 dollars using the Consumer Price Index.

Table 3.1 shows the monthly basic pay rates received by E1s and E2s under each pay option. Table 3.2 shows the composite annual cost of pay and allowances, assuming today's mix of married/single personnel and cash/in-kind allowances.

Table 3.1  
MONTHLY BASIC PAY RATES  
UNDER SELECTED COMPENSATION ALTERNATIVES

| Pay policy  | E1     |         | E2     |         |
|---|--------|---------|--------|---------|
|   | Single | Married | Single | Married |
| 1. RMC <sup>*</sup>                                 | 612    | 612     | 666    | 666     |
| 2. Current FY 1978 rates                            | 398    | 398     | 443    | 443     |
| 3. Federal minimum wage                             | 459    | 459     | 459    | 459     |
| 4. Minimum wage less allowances                     | 359    | 215     | 354    | 228     |
| 5. Poverty level                                    | 256    | 349     | 256    | 348     |
| 6. Poverty level less allowances                    | 155    | 104     | 150    | 117     |
| 7. Korean war rates<br>(FY78 dollars) <sup>**</sup> | 193    | 193     | 199    | 199     |

<sup>\*</sup> Assumes that the cash equivalent of all allowances is included in basic pay.

<sup>\*\*</sup> For E1s and E2s with less than 2 years' service.

NOTE: Total compensation exceeds these rates under pay options in which allowances are provided without deducting their cost from basic pay.



Table 3.2  
COMPOSITE E1/E2 ANNUAL RATES FOR PAY AND ALLOWANCES  
UNDER SELECTED COMPENSATION ALTERNATIVES

|  | <u>E1</u> | <u>E2</u> |
|--|-----------|-----------|
| Regular military compensation          | \$7338    | \$7986    |
| Current FY 1978 pay rates              | 6273      | 6875      |
| Federal minimum wage                   | 5512      | 5512      |
| Poverty level (allowances extra)       | 4697      | 4766      |
| Poverty level                          | 3262      | 3278      |
| Korean War real pay (allowances extra) | 3819      | 3891      |

#### Derivation of Force Characteristics

Nearly all military personnel costs can be determined once information is established concerning officer/enlisted mix, grade structure, years of service, marital status, and entitlements to subsistence and housing allowances. Taken together, these characteristics determine approximately 94 percent of the active military personnel appropriations budget. (The remaining costs consist essentially of PCS costs, bonuses, separation allowances, apprehension of deserters, and costs related to MIAs and POWs; because these costs are small, proportionately large deviations in these costs from the levels assumed in this analysis are not expected to have significant impact on the results.) For the base case, official projections for these characteristics were furnished by the Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) (OASD(MRA&L)). As would be expected, therefore, costs for this force at current pay rates and policies equate to FY 1978 appropriations plus 1 October 1977 pay and subsistence supplementals. These costs by Service are as follows:

|                       | <u>Army</u>            | <u>Navy</u>   | <u>Marines</u> | <u>Air Force</u> | <u>Defense</u> |
|-----------------------|------------------------|---------------|----------------|------------------|----------------|
|                       | (thousands of dollars) |               |                |                  |                |
| FY1978 appropriations | 8,741,800              | 6,169,662     | 1,918,400      | 7,199,900        | 24,029,762     |
| Pay sup.              | 409,500                | 295,200       | 102,100        | 403,300          | 1,210,100      |
| Subsistence sup.      | <u>13,300</u>          | <u>11,100</u> | <u>2,800</u>   | <u>5,300</u>     | <u>32,500</u>  |
| Total                 | 9,164,600              | 6,475,962     | 2,023,300      | 7,608,500        | 25,272,362     |

The bases for estimation of key characteristics for alternative scenarios are summarized in Table 3.3, Bases for Estimation of Major Force Characteristics for Alternative Scenarios. In general, grade structure (including officer/enlisted mix) and years of service have been based on historical experience or current actual structure for the Ready Reserve while remaining characteristics are based on current Defense planning factors.

#### Calculation of Cost Estimates

As indicated above, total cost estimates cover only the elements of the four active military personnel appropriations. Military-personnel-related costs for reserves, military family housing, operations and maintenance support, and retired pay are, therefore, excluded from treatment. As an exception, under the two options which assume E1/E2s will pay for quarters furnished in kind, the cost of these quarters was shifted into the military personnel budget and had to be deducted in order to reflect net costs on a basis comparable to other compensation alternatives.

Basic pay was calculated using the grade structure and years-of-service estimates derived for each scenario. In general, officer and enlisted allowances were estimated in proportion to officer and enlisted strengths with adjustments to allow for the marginal cost of additional E1/E2 increments. Other costs (e.g., PCS) were based on total strength while cadet pay and allowances were held constant. The RMC tax advantage was computed by scaling current tax advantages in proportion to changes in total basic pay.

#### COMPARISON OF ALTERNATIVES

Table 3.4, Total DoD Active Military Personnel Appropriations Under Alternative Compensation Policies and Scenarios summarizes the result of the calculations described in preceding sections of this chapter. With today's forces, payment of Federal minimum wage to E1/E2s would save \$400 million per year while payment at the poverty level (allowances deducted) would save \$1.3 billion. Under the largest force considered, these differences would grow to \$2.0 billion and \$6.3 billion, respectively.

Table 3.3  
BASES FOR ESTIMATION OF MAJOR FORCE CHARACTERISTICS FOR ALTERNATIVE SCENARIOS

| Scenario  | Officer/Enlisted Mix  | Grade Structure  | Years of Service                               | Marital Status | Allowances |
|---|---|--|--|----------------|------------|
| 200,000 Increment<br>(Army/Air Force only)<br>(2.3 million total) | Linear interpolation between FY1978 authorization and FY1968 Vietnam peak for Army and Air Force                          | FY1978 President's Budget proportions for Army and Air Force   |  |                |            |
| 1 Million Call-up<br>(3.1 million total)                          | Addition of all currently available Ready Reserve enlisted to FY1978 authorization base; fill with Ready Reserve officers | Actual proportions of Selected Reserves and Individual Ready Reserves (IRR), plus active force base at FY 1978 President's Budget proportions.   | FY 1978 President's Budget proportions for DoD |                |            |
| 3.5 Million Vietnam Peak  | Historical actuals  |  |  |                |            |
| 3.5 Million Mobilization  | Model derived through linear regression on officer and enlisted strengths for 1964-1977                                   | Reserves added to base of FY1978 President's Budget proportions as in 1 million call-up. Additional accessions added as EI/E2s in same ratio as average historical EI/E2 proportions.        | Same as for 1 million call-up calculations     |                |            |
| 4.5 Million Mobilization  |   | EI/E2s added to 3.5 million mobilization enlisted base in same ratio as average historical EI/E2 proportions; 01/02s added to officer base in ratio based on average historical proportions. |  |                |            |

Table 3.4  
TOTAL DOD MILITARY PERSONNEL APPROPRIATIONS  
(Billions of FY78 dollars)

| Scenario                     | Total strength (millions) | Current pay + tax advantage (RMC) | Current pay | Minimum wage to El/E2s (allowances deducted) | Poverty wage to El/E2s (allowances extra) | Korean War real pay to El/E2s (allowances extra) |
|------------------------------|---------------------------|-----------------------------------|-------------|--|---|--|
| 1. Current active forces     | 2.1                       | 26.8                              | 25.3        | 24.9   | 24.6                                      | 24.3   |
| 2. 200,000 Increment         | 2.3                       | 29.2                              | 27.5        | 27.1   | 26.8                                      | 26.5   |
| 3. Presidential call-up      | 3.1                       | 40.3                              | 38.0        | 37.5   | 37.0                                      | 36.7   |
| 4A. Vietnam peak             | 3.5                       | 43.1                              | 40.8        | 40.1   | 39.6                                      | 39.1   |
| 4B. 3.5 Million mobilization | 3.5                       | 43.3                              | 40.9        | 39.9   | 39.1                                      | 38.4   |
| 5. 4.5 Million mobilization  | 4.5                       | 52.2                              | 49.2        | 47.2   | 45.7                                      | 44.3   |

A return to the real basic pay rates of the Korean War (with current allowances extra) would provide a total compensation slightly more costly than payment at the poverty level with allowances deducted.

Table 3.4 also shows that the cost to the Defense Budget<sup>\*</sup> of paying a total RMC-based salary would be \$1.5 billion at current force levels and \$3 billion at the 4.5 million strength level.

As previously suggested, the purpose of this analysis was to illustrate the costs of various combinations of compensation and force alternatives. No advocacy for any particular policy is intended and no recommendations are made. It is hoped, however, that this will provide those who do recommend or make compensation policy with additional data upon which to base their deliberations.

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<sup>\*</sup> But not to the Government, since some or all of the additional costs would be recovered in tax revenues.

Appendix A

SENSITIVITY ANALYSES ON THE SUPPLY OF QUALITY MALE ACCESSIONS

Appendix A  
SENSITIVITY ANALYSES ON THE SUPPLY OF QUALITY MALE ACCESSIONS

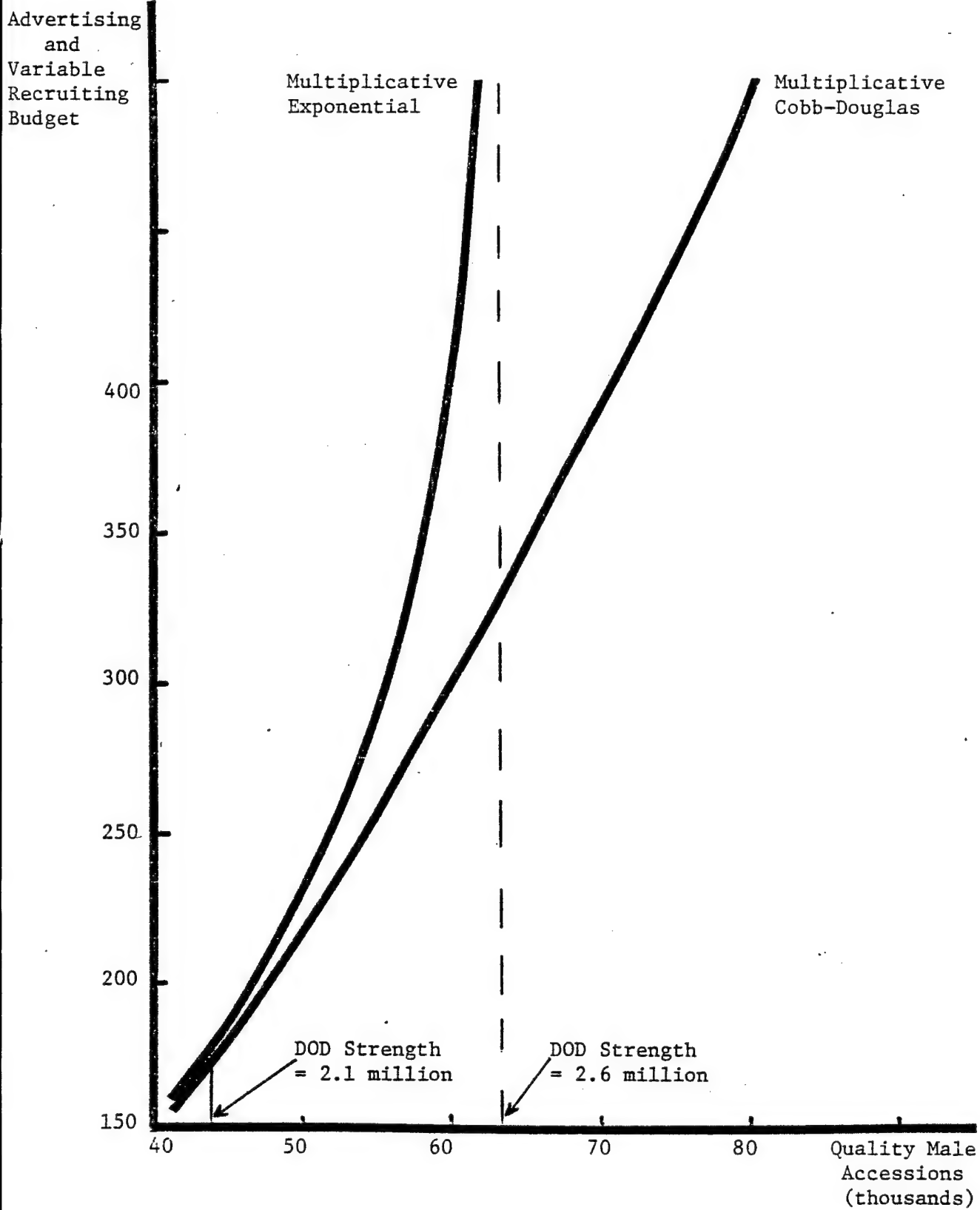
ALTERNATIVE MODELS OF RECRUITING AND ADVERTISING EFFECTIVENESS

Perhaps the only universally agreed upon requirement for a model purporting to describe the effect of recruiting and advertising (or any other incentive program, including pay) on quality male accessions over a wide range is that of diminishing returns. Essentially, this characteristic states that additional resource expenditures become progressively less effective as the level of expenditures increases; or, alternatively, the marginal cost per accession increases with increasing accession requirements.

The combined recruiting and advertising budgets used in this analysis are the output of the GRC Optimal Budget Allocation Model (OBAM) assuming a multiplicative Cobb-Douglas production function.\* The Cobb-Douglas form exhibits the property of diminishing returns, but it is not unique in this respect. Another form exhibiting diminishing returns which has been used in past analyses is a multiplicative exponential form.\*\*

Figure A.1 is a comparison of the OBAM analysis of Army quality accessions for both of these functional forms.

As can be seen, the multiplicative exponential form has an asymptote at the 63000 quality male accession level. Even so, the difference in budget requirements indicated by these fundamentally different models is only \$100 million at 60,000 accessions. The greatest differences between the models arise at accession requirements beyond 63,000 when the multiplicative exponential model implies that no finite expenditure will provide the required accessions. In other words, according to the multiplicative exponential model, there is a maximum number of accessions that can be had, and that number cannot be exceeded, regardless of incentive levels, recruiting budgets or anything else.



ALTERNATE MODELS OF MINIMAL RECRUITING AND ADVERTISING  
BUDGETS VERSUS QUALITY MALE ACCESSION  
REQUIREMENTS FOR THE ARMY

Figure A.1



There is no empirical basis for determining which model is more accurate at substantially increased accession levels. However, the models show relatively close agreement (differing by no more than \$100 million) over the range of increased strengths that would reasonably be considered for a standing peacetime force.

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\* The Cobb-Douglas form is

$$N = c R^{\epsilon_R} A^{\epsilon_A}$$

where  $N$  is the number of quality male accessions,  
 $R$  and  $A$  are, respectively, the variable recruiting budget and advertising budget,  
 $\epsilon_R$  and  $\epsilon_A$  are the associated elasticities, and  
 $c$  is a scaling constant.

\*\* The multiplicative exponential form is

$$N = c(1 - e^{-R\epsilon_R})(1 - e^{-A\epsilon_A})$$

where  $N$  is the number of quality male accessions,  
 $R$  and  $A$  are, respectively, the variable recruiting and advertising budgets,  
 $\epsilon_R$  and  $\epsilon_A$  are the associated marginal productivities, and  
 $c$  is a scaling constant.

Appendix B

COMPARISON OF FINDINGS WITH OTHER STUDIES

## Appendix B

This appendix compares the results of the GRC study with those of two recent studies which also estimated the cost of the AVF relative to the draft. One study was conducted by the GAO, the other by OASD(MRA&L).

### GAO STUDY

A recent GAO report (reference 6) assesses the overall costs that may be attributed to the AVF vis-a-vis conscription. That GAO report concludes that the AVF has cost \$18 billion cumulatively since 1971. It estimates that the 1976 cost was \$3.2 billion. This compares to the GRC finding that no more than \$228 million would be saved annually, assuming no reduction in pay and allowances.

Table B.1 lists the GAO cost estimates by category and compares them with the costs considered by GRC in the present study. Table B.1 also shows how the GRC estimates could be improved by adjusting them to account for those costs identified by GAO that are relevant to the issues addressed by GRC but which were omitted from the GRC analysis.

The GAO cost estimate consists of certain component costs that could be saved by a return to the draft and some component costs that could not be saved. Those that would be saved include enlistment bonuses and recruiting and advertising which are addressed in this GRC study. GAO estimates the total savings in these areas to be \$242 million annually, which is essentially the same as GRC's estimate of \$245 million (comparing Tables 2.14 and 2.16), although the methods of estimation used by GAO and GRC are quite different. (One methodological difference is that GAO does not account for the fact that enlistment bonuses increase the average length of enlistment terms, which reduces accession requirements and training costs.)

Certain other costs considered by GAO could properly be added to the GRC estimate of the cost difference between AVF and draft environments. These include the costs of recruiting and maintaining doctors and related professionals and certain miscellaneous costs including reserve recruiting.

Table B.1  
Comparison of AVF Cost Elements  
Considered by GAO and GRC  
(\$ millions)

| <u>Cost element</u>      | <u>GAO estimate<br/>(1976)</u> | <u>GRC<br/>estimate</u> | <u>Adjusted GRC<br/>estimate</u> |
|--------------------------|--------------------------------|-------------------------|----------------------------------|
| PREMILITARY SERVICE      |                                |                         |                                  |
| Selective Service System | -69.5                          |                         | -69.5                            |
| Enlistment bonuses       | 68.5                           | 58.0                    | 58.0                             |
| Recruiting & advertising | 173.1                          | 187.0                   | 187.0                            |
| Examinations             | -2.1                           |                         | -2.1                             |
| NG/Reserve recruiting    | 56.2                           |                         | 56.2                             |
| Coast Guard recruiting   | 2.0                            |                         | 2.0                              |
| Subtotal                 | <u>228.2</u>                   | <u>245.0</u>            | <u>231.6</u>                     |
| MILITARY SERVICE         |                                |                         |                                  |
| Base pay                 | 1664.0                         | *                       | *                                |
| BAQ                      | 490.0                          | *                       | *                                |
| Pay-related items        | 346.9                          |                         | *                                |
| Medical special pays     | 121.4                          |                         | 121.4                            |
| Public Health Service    | 21.1                           |                         | 21.1                             |
| USUHS construction       | 28.6                           |                         |                                  |
| Training & education     | 39.9                           | -17.0                   | -17.0                            |
| Attrition                | 28.6                           | **                      | **                               |
| Civilian substitution    | -92.0                          |                         |                                  |
| Civilian housekeeping    | 51.7                           |                         |                                  |
| Batchelor housing        | 129.8                          |                         |                                  |
| Family housing           | 93.4                           |                         |                                  |
| Career counselors        | 0.3                            |                         |                                  |
| Subtotal                 | <u>2923.7</u>                  | <u>-17.0</u>            | <u>125.5</u>                     |
| POSTMILITARY SERVICE     |                                |                         |                                  |
| Separation pay           | 22.3                           |                         | 22.3                             |
| Unemployment benefits    | <u>73.4</u>                    |                         |                                  |
| Subtotal                 | 95.7                           | <u>0</u>                | <u>22.3</u>                      |
| TOTAL                    | 3247.6                         | 228.0                   | 379.4                            |

\* Savings depend on assumed pay policy under the draft. GRC assumes current pay would be maintained.

\*\* Cost of attrition is reflected in the costs recruiting, advertising, bonuses, and training.

At the same time, costs of operating the Selective Service System would increase. Had GRC included these cost changes, the net effect would be to increase GRC's estimate of the cost difference between the AVF and draft by \$151.4 million.

It is not clear how much of the other cost items considered by GAO could be saved by a return to the draft. These consist of increased pay, housing construction and allowances, and certain pay-related costs. While it is clear that much of these cost increases were justified by DOD originally as required to support the AVF, it may well be that many of these cost increases would also have occurred in the absence of the AVF. This latter argument is especially supportable in the cases of pay increases and improved housing for both officers and career enlisted.

Note that pay and allowances and pay-related items account for \$2.5 billion of GAO's total annual savings of \$3.2 billion. The savings in the costs that could be achieved through a return to the draft depend upon the pay policy adopted under the draft. The GRC analysis of AVF costs assumed that pay would not change. Under this assumption, GRC's estimate of annual savings, adjusted to reflect relevant cost categories identified by the GAO, is \$379.4 million.

As Chapter 3 shows, even if E1/E2 pay and allowances were reduced to the minimum wage, the savings would be much less than the \$2.5 billion cited by GAO. Pay and allowances would decline by \$400 million (Table 3.4); adding a proportionate share of "pay-related items" estimated by GAO brings total pay-related savings to \$464.4 million, which, when added to the adjusted GRC estimate in Table B.1, yields a grand total savings of \$843.8 million. It should also be noted that first-term pay and allowances in the years prior to 1971 were less than the Federal minimum wage, so there is additional support for the argument that some significant fraction of the large pay increases would have been provided, independent of AVF considerations.

As for housing costs, GAO implicitly assumes that higher housing construction rates were not needed in the early 1970's except as an AVF incentive. This assumption is questionable in light of the fact that little of such housing is available to first-term enlistees.

# OSD STUDY

In a recent analysis (reference 8), OSD has estimated that at current force levels about \$500 million could be saved annually by a return to a draft, assuming no reduction in pay and allowances. Unpublished backup data to that report identifying the components of this savings estimate are summarized in Table B.2 and compared to the GRC estimates. Table B.2 shows the two estimates to be of the same order of magnitude.

Table B.2  
Comparison of AVF Cost Elements  
Considered by OSD and GRC  
(\$ millions)

|                      | <u>OSD</u>       | <u>GRC</u>          |
|----------------------|------------------|---------------------|
| <u>Active forces</u> |                  |                     |
| Recruiting           | 230 <sup>*</sup> | { 187 <sup>**</sup> |
| Advertising          | 80 <sup>*</sup>  |                     |
| Enlistment bonuses   | 60 <sup>*</sup>  |                     |
| Training             | --               | 58 <sup>**</sup>    |
|                      |                  | -17 <sup>**</sup>   |
| Subtotal             | 370              | 228                 |
| <u>Reserves</u>      |                  |                     |
| Recruiting           | 90               |                     |
| Advertising          | 18               |                     |
| Subtotal             | 108              | 0                   |
| TOTAL                | 478              | 228                 |

\* Officer and enlisted programs, including medical programs.

\*\* Enlisted programs only.

Appendix C

DETAILED COMPARISON OF COMPENSATION POLICIES  
IN PEACE AND WAR

## Appendix C

### POSSIBLE PAY ALTERNATIVES

#### Introduction

The armed services are currently all-volunteer forces. Military pay has been set at levels high enough and the conditions of serving have been made desirable enough to attract the required number and quality of volunteers. Current conditions could change, however. Congress would, in all likelihood, consider reinstating the draft if there were either a national emergency requiring a large, sudden increase in the size of the armed forces or if it became difficult to voluntarily induce sufficient numbers to enlist in the service.

This section describes the pay implications of a range of alternative compensation systems that could be considered. It describes the characteristics of the current compensation system, the changes that could occur under alternative pay systems, and how these changes might affect individual military personnel costs.

#### Approach

This analysis is concerned with the development and application of a number of alternative pay policies. The assumptions, personnel characteristics, and rationale behind the pay policies developed are described here.

For purposes of this analysis, the draft is not assumed to be a significant factor in attracting and retaining officers or higher grade enlisted personnel. This is a condition which, in fact, pertained to the Vietnam era. Further, it would be difficult to justify changing the pay or enlistment conditions of current members of the armed forces under all but the most extreme circumstances.

Two forms of compensation are considered in this analysis. They are:

1. Pay and Allowances (Basic Pay + Quarters + Subsistence), and
2. Regular Military Compensation (RMC).



Pay and allowances are the portions of an individual's compensation that are included in the Defense Department's budget. RMC is defined as the sum of basic pay, quarters, and subsistence allowances and the tax advantage gained from having untaxed allowances. RMC is the salary equivalent of military pay and allowances. Since there has been discussion of changing the military to a salary system, one option involving payment of RMC to all active military personnel has been included here for comparison with other alternatives.

Six compensation alternatives affecting the pay and allowances of E-1s and E-2s are compared in this analysis. They are:

1. Current pay and allowances
2. Federal minimum wage plus current allowances
3. Federal minimum wage with allowances deducted
4. Poverty-level basic pay plus current allowances
5. Poverty-level pay with allowances deducted
6. Korean War real pay plus current allowances

These cases span the likely range of pay alternatives that might be considered under a draft. It would be unlikely that Congress would resort to involuntary conscription and pay draftees in excess of current compensation levels. Similarly, poverty-level wages can be considered a lower limit for military pay. Any significant decline below this level, even under wartime emergency conditions, would probably be unacceptable to the public and would undoubtedly seriously limit the military's ability to carry out its mission.

To test the sensitivity of extending pay reductions to additional personnel, one other alternative is considered in which Korean War real pay rates are applied to E-1s through E-4s and O-1s and O-2s.

Current Compensation. Basic pay is determined by grade only\* for E-1s and E-2s. The current annual rates are \$4770 for an E-1 and \$5317 for an E-2. The only variations in compensation occur in allowances. The value of the quarters allowance depends on marital status and whether it is given in kind or in cash. Table C.1 gives the four possible allowance values

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\*Term of service is not a factor as it is for costing all other grades.

that an E-1 could receive. The in-kind values are from an OASD(MRA&L) estimate of the value of in-kind quarters. The cash values are the FY 1978 basic allowance for quarters (BAQ). Single E-1s in government quarters receive the lowest valued quarters. Single cash BAQ and married cash BAQ rank third and second in terms of quarters value, while married quarters in-kind is the highest possible value of quarters for an E-1. Table C.2 gives the corresponding values for an E-2. The married rates are the same as for an E-1, while the single quarters values are somewhat higher.

Subsistence allowance can also be given in cash or in kind. The annual cash basic allowance for subsistence is currently \$1037 for all enlisted men. The values of subsistence in kind were derived from FY 1978 budget justification data adjusted for supplemental increases. These vary by service \*, but a typical DOD enlisted man can expect to receive \$857 of subsistence in kind.

Table C.3 illustrates the different values of pay and allowances that are possible for an E-1 to receive. There is a range of nearly \$2100 from the E-1 who lives in a barracks to the married E-1 in government-furnished quarters. Table C.4 gives the figures for an E-2, where the pattern is the same.

While it is useful to understand the different pay and allowances that result from a compensation policy, it is also necessary to have an average or typical compensation for comparing costs between policies. This can be done by taking a weighted average of the proportions receiving each combination of pay and allowances times its value. Table C.5 gives the percentages of E-1s who receive each combination of pay and allowances. It has been assumed here that those who receive cash BAQ also receive cash BAS. All others receive allowances in kind. Table C.6 gives the same data for E-2s.

It is readily apparent that most E-1s and E-2s are unmarried and live in a barracks. This category is also the lowest valued category of pay and allowances. Most married E-1s and E-2s receive cash allowances which

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\* The Army and Marines had lower per capita subsistence costs than the Navy and Air Force.

Table C.1

QUARTERS ALLOWANCES FOR AN E-1  
(annual rate)

|         | <u>Single</u> | <u>Married</u> |
|---------|---------------|----------------|
| In Kind | 342           | 2437           |
| In Cash | 983           | 1710           |

Table C.2

QUARTERS ALLOWANCES FOR AN E-2  
(annual rate)

|         | <u>Single</u> | <u>Married</u> |
|---------|---------------|----------------|
| In Kind | 389           | 2437           |
| In Cash | 1040          | 1710           |

Table C.3

PAY AND ALLOWANCES FOR AN E-1  
(annual rate)

|         | <u>Single</u> | <u>Married</u> |
|---------|---------------|----------------|
| In Kind | 5969          | 8064           |
| In Cash | 6790          | 7517           |

Table C.4

PAY AND ALLOWANCES FOR AN E-2  
(annual rate)

|         | <u>Single</u> | <u>Married</u> |
|---------|---------------|----------------|
| In Kind | 6563          | 8611           |
| In Cash | 7394          | 8064           |

are valued lower than government married quarters. The calculation of the average E-1's pay and allowances finds it to be \$6273 or about \$300 more than the single E-1 in government quarters. The average E-2 is \$6875.

Minimum Wage with Allowances Extra. The Federal minimum wage as of January 1, 1978, is \$2.65 per hour. On an annual basis, this would be \$5512 for a 40-hour week. This is above the basic pay for both E-1s and E-2s. Therefore, paying the minimum wage with allowances would constitute an increase in pay which would not be a likely alternative in a draft environment. Furthermore, the Federal minimum wage will increase to \$3.35 an hour by 1981. As this will be an average annual increase of 8.1 percent, the minimum wage is likely to remain above basic pay over the near future.

Minimum Wage with No Allowances Included. One alternative to be considered is the elimination of subsistence and quarters allowances and payment of the minimum wage to all E-1s and E-2s. E-1s and E-2s would be charged for subsistence and quarters out of their salary. This would result in an annual salary cost of \$5512 for all categories of E-1s and E-2s. The average cut in terms of pay and allowances would be about \$750 for an E-1 and \$1363 for an E-2. A married E-2 in government quarters would lose the most (\$3099) and a single E-1 in government quarters the least (\$457).

Poverty Level Pay with Allowances Included. The current poverty index was adopted by a Federal Interagency Committee in 1969. It is based on the Department of Agriculture's 1961 Economy Food Plan. A 1955 Department of Agriculture survey found that families of three or more spend one-third of their income on food. Therefore, the poverty level was set at three times the cost of the economy food plan. Multipliers for couples and individuals living alone are somewhat larger in order to reflect the relatively larger fixed expenses of smaller families.

Money income used to determine if an individual or family is above the poverty level is the gross income. No subtraction should be made for Social Security, income taxes, Medicare, or any other deductions. Money income includes any regular cash receipts such as Social Security, public assistance, interest, dividends, rent, pensions, unemployment insurance or worker's compensation. Capital gains are not included. Also excluded are

Table C.5

PERCENTAGES OF E-1s RECEIVING  
DIFFERENT COMBINATIONS OF PAY AND ALLOWANCES

|                    | <u>Single Rate</u> | <u>Married Rate</u> | <u>Total Rate</u> |
|--------------------|--------------------|---------------------|-------------------|
| Allowances in Kind | 82.1               | 5.8                 | 87.9              |
| Allowances in Cash | 0.6                | 11.5                | 12.1              |
| TOTAL              | 82.7               | 17.3                | 100.0             |

Table C.6

PERCENTAGES OF E-2s RECEIVING  
DIFFERENT COMBINATIONS OF PAY AND ALLOWANCES

|                    | <u>Single Rate</u> | <u>Married Rate</u> | <u>Total Rate</u> |
|--------------------|--------------------|---------------------|-------------------|
| Allowances in Kind | 78.7               | 1.1                 | 79.8              |
| Allowances in Cash | 2.1                | 18.1                | 20.2              |
| TOTAL              | 80.8               | 19.2                | 100.0             |

Table C.7

1976 POVERTY LEVELS BY FAMILY SIZE  
(MALE-HEADED HOUSEHOLD, NONFARM, UNDER 65)

| <u>Family Size</u> | <u>Poverty Income Level</u> | <u>Percentage of E-1s</u> | <u>Percentage of E-2s</u> |
|--------------------|-----------------------------|---------------------------|---------------------------|
| One                | 3069                        | 82.7                      | 80.8                      |
| Two                | 3846                        | 12.1                      | 13.4                      |
| Three              | 4565                        | 3.7                       | 4.1                       |
| Four               | 5818                        | 1.3                       | 1.4                       |
| Five               | 6884                        | 0.2                       | 0.2                       |

non-money transfers such as food stamps, health benefits, and subsidized housing. Thus, people with the same gross cash income may enjoy substantially different levels of subsistence, depending on their pay deductions and any non-money transfers they receive.

The poverty levels used were based on the average 1976 Consumer Price Index. The figures for a male-headed household, nonfarm, under 65 years old were used. These ranged from \$3069 for a single individual to \$6884 for a family of five (see Table C.7). Data on the percentage distribution of family sizes by grade was collected from OASD(MRA&L). From this data it was possible to calculate the average poverty income. Basic pay would average \$3217 for an E-1 and \$3278 for an E-2. The higher level for an E-2 is due to their somewhat larger family size. Poverty-level pay with average allowances amounts to \$4720 for an E-1 and \$4836 for an E-2.

Poverty Level Base Pay with Allowances Not Included. The most stringent pay alternative considered was paying E-1s and E-2s at the poverty level with no subsistence allowances. The pay would be \$3262 to an average E-1 and \$3278 to an E-2. The difference is due to the slightly larger family size of E-2s. It was assumed that larger families would be paid at the poverty level for their size families. No assumptions were made about whether the spouse works or not. It would probably not be feasible to pay some draftees nothing and others a salary on the basis of their spouse's salary.

Korean War Real Pay Plus Current Allowances. In this alternative, E-1s and E-2s receive basic pay equal to the real rates paid in 1952 during the Korean War, that is, 1952 rates increased to FY 1978 dollars. The Consumer Price Index was used as a basis for adjustment. This index increased by a factor of 2.32 from 1952 to October 1977. Current allowances are assumed to be provided (at current rates) in addition to basic pay.

Comparison of Results. Table C.8 gives values of basic pay that would result under the different policy options discussed for E-1s and E-2s. Table C.9 shows pay and allowances for the same policies. The most stringent policy, poverty wages with allowances deducted, would result in an average pay cut of \$3000 for an E-1 and \$3600 for an E-2.

Table C.8  
MONTHLY BASIC PAY RATES

| Pay policy                                       | E-1    |         | E-2    |         |
|--|--------|---------|--------|---------|
|  | Single | Married | Single | Married |
| 1. RMC <sup>1/</sup>                             | 612    | 612     | 666    | 666     |
| 2. Current FY 1978 rates                         | 398    | 398     | 443    | 443     |
| 3. Federal minimum wage                          | 459    | 459     | 459    | 459     |
| 4. Minimum wage less allowances                  | 359    | 215     | 354    | 228     |
| 5. Poverty level                                 | 256    | 349     | 256    | 348     |
| 6. Poverty level less allowances                 | 155    | 104     | 150    | 117     |
| 7. Korean War rates (FY78 dollars) <sup>2/</sup> | 193    | 193     | 199    | 199     |

<sup>1/</sup> RMC assumes all allowances are given in cash. All other pay policies use current mix of cash and in-kind.

<sup>2/</sup> For E-1s and E-2s with less than 2 years of service.

Table C.9

## COMPARISON OF PAY AND ALLOWANCE ALTERNATIVES

| <u>Alternatives</u>  | <u>E-1<br/>PAY+BAQ+BAS*</u> | <u>E-2<br/>PAY+BAQ+BAS*</u> |
|--|-----------------------------|-----------------------------|
| 1. Current compensation  |                             |                             |
| a) Married only  | 7701                        | 8094                        |
| b) Current Mix of<br>single/married  | 6273                        | 6875                        |
| 2. Minimum wage basic pay plus<br>allowances (current mix of<br>single/married)  | 6947                        | 7001                        |
| 3. Minimum wage for basic pay<br>(allowances deducted)                           | 5512                        | 5512                        |
| 4. Poverty level basic pay<br>plus allowances (current<br>mix of single/married) | 4697                        | 4766                        |
| 5. Poverty level basic pay<br>(allowances deducted)                              |                             |                             |
| a) Current mix of<br>single/married  | 3262                        | 3278                        |
| b) Single only   | 3069                        | 3069                        |
| 6. Korean War real pay plus<br>current allowances                                | 3819                        | 3891                        |

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\* Current mix of cash and in kind allowances; includes the value of quarters and subsistence furnished in kind.



Table C.10 gives the RMC equivalent salary for those receiving all cash allowances. RMC follows the same pattern as pay and allowances. The salary differences between the lowest possible pay policies and RMC is greater. This is because poverty wages with allowances deducted have no tax advantage, since all compensation is taxed under this policy.

#### DERIVATION OF FORCE CHARACTERISTICS UNDER SELECTED SCENARIOS

The second task in evaluating military personnel costs under different compensation policies was to determine the personnel characteristics of forces under selected scenarios. These force scenarios are:

1. Current Active Force
2. 200,000 Increment to the Current Active Force
3. Presidential Call-up
- 4A. Vietnam Peak Force Level
- 4B. 3.5 Million Mobilization
5. 4.5 Million Mobilization

Military personnel costs are most sensitive to five characteristics of the force. These are:

1. Officer/enlisted mix,
2. Grade structure,
3. Years of service,
4. Marital status, and
5. Whether allowances are given in cash or in kind.

Approximately 94 percent of the total DOD military personnel budget is determined by these force characteristics. This paper describes the methodology used to determine these personnel characteristics for the different scenarios. Any assumptions made, including supporting evidence, are described in detail.

#### Current Force Levels

The manpower baseline used for this analysis is the DOD military strength included in the FY 1978 President's budget as adjusted by the Defense Appropriation Authorization Act for FY 1978 (PL 95-79, July 30, 1977). The armed services projected a total strength of 2,085,100 men

Table C.10  
COMPARISON OF RMC PAY ALTERNATIVES

| <u>Alternatives</u>  | <u>E-1*</u><br><u>RMC</u> | <u>E-2*</u><br><u>RMC</u> |
|--|---------------------------|---------------------------|
| 1. Current compensation  |                           |                           |
| a) Married only  | 7978                      | 8596                      |
| b) Current mix of single/<br>married   | 7338                      | 7986                      |
| 2. Minimum wage for base pay plus<br>allowances (current mix of<br>single/married) | 8176                      | 8251                      |
| 3. Minimum wage for base pay<br>(allowances deducted)                              | 5512                      | 5512                      |
| 4. Poverty level base pay plus<br>allowances (current mix of<br>single/married)    | 5715                      | 5805                      |
| 5. Poverty level base pay<br>(allowances deducted)                                 |                           |                           |
| a) Current mix of single/<br>married   | 3262                      | 3278                      |
| b) Single only   | 3069                      | 3069                      |
| 6. Korean War real pay plus<br>current allowances                                  | 4301                      | 4318                      |

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\* Based on cash allowances.

at that time. Official data on military personnel force characteristics furnished by OASD(MRA&L) were used for a basis for cost estimates. The OASD data contain detailed breakouts of personnel by grade, years of service, marital status, and whether allowances were given in cash or in kind. The total strength was the same as in the President's budget.

#### 200,000 Increment

The second scenario evaluated was an increase of 200,000 over current force levels. The increment was apportioned as follows:

|           |         |
|-----------|---------|
| Army      | 150,000 |
| Air Force | 50,000  |

Navy and Marine Corps strengths remain constant.

The first task was to determine the officer/enlisted mix for the incremental forces. Various assumptions can be made regarding officer/enlisted mix. In the baseline forces, officers represent 12.5 percent and 16.6 percent of the active Army and Air Force, respectively. For several reasons, it can be assumed that officer proportions would decline as combat forces increase. This is because combat forces generally require fewer officers in proportion to enlisted strength than do total forces, and because a command structure and RDT&E nucleus with relatively more officers is required at lower peacetime levels as a nucleus for rapid buildup. Going to Vietnam peaks (end FY 1968) of 1,552,816 Army and 904,953 Air Force, officer proportions follow the postulated pattern (10.6 percent for Army and 15.3 percent for Air Force).

A straight-line interpolation between FY 1978 and the FY 1968 Vietnam peak has been chosen. The officer/enlisted mix is estimated as 12.1 percent for the Army and 16.4 percent for the Air Force. Although actual proportions would be based on actual manpower standards/requirements for forces being added, these estimates are reasonable because they closely approximate historical proportions at similar strengths. Applying these results to the 200,000 increment yields the following officer/enlisted figures:

|          | <u>Army</u> | <u>Air Force</u> | <u>Total</u> |
|----------|-------------|------------------|--------------|
| Officers | 15,400      | 6,900            | 22,300       |
| Enlisted | 134,600     | 43,100           | 177,700      |
| Total    | 150,000     | 50,000           | 200,000      |

These increases were then added to the FY 1978 baseline forces to produce the numbers of officers and enlisted men given in Table C.11. The number of cadets is assumed to remain constant in all scenarios.

Once the officer/enlisted mix of the increment was established, the next step was to determine the grade structure and other personnel characteristics. The force buildup is assumed to be a gradual one. Therefore, the personnel increases are allocated across grades in the same proportion as the current Army and Air Force. The proportional increases are:

|                         |   |              |
|-------------------------|---|--------------|
| Army enlisted men       | : | 19.1 percent |
| Army officers           | : | 15.7 percent |
| Air Force enlisted men: |   | 8.9 percent  |
| Air Force officers      | : | 7.3 percent  |

The DOD grade distribution that results from the above increases is given in Table C.12. The years of service distribution, proportions receiving allowances in cash or in kind, and proportion married all are assumed to remain the same. These assumptions are realistic for this scenario, which is the result of a gradual buildup.

#### Presidential Call-Up Authority

The President can activate up to one million reservists for a period of up to 2 years by declaration of a national emergency. This section estimates the personnel characteristics of a force created through such an action.

The one million reservists will come from the Ready Reserve. All of the Selected Reserve (SR) will be activated. Individual Ready Reservists (IRR) will be activated until the limit of one million personnel is reached. The historical availability rate for the SR is 95 percent; for the IRR it is 70 percent.\* The result is 767,200 SRs and 232,800 IRRs will report for active duty.

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\* These are the historical availability factors used by the Defense Manpower Commission. The Reserve Compensation System Study is currently analyzing these figures in some detail. However, without knowing the specific skill requirements demanded by the scenario, these aggregate yield rates will suffice.

Table C.11  
SUMMARY OF STRENGTH COMPUTATIONS

| <u>Scenario</u>              | <u>DOD End Strength</u> |                 |              | <u>Grade structure</u>                   |
|------------------------------|-------------------------|-----------------|--------------|--|
|                              | <u>Officers</u>         | <u>Enlisted</u> | <u>Total</u> |  |
| 1. CURRENT ACTIVE FORCES     | 274,000                 | 1,811,000       | 2,085,000    | Current active                           |
| 2. 200,000 INCREMENT         |                         |                 |              | Current active                           |
| Current active forces        | 274,000                 | 1,811,000       | 2,085,000    |  |
| + 150,000 Army               | 15,000                  | 135,000         | 150,000      |  |
| + 50,000 Air Force           | 7,000                   | 43,000          | 50,000       |  |
| Total                        | 296,000                 | 1,989,000       | 2,285,000    |  |
| 3. PRESIDENTIAL CALL-UP      |                         |                 |              | Current active<br>and<br>current reserve |
| Current active forces        | 274,000                 | 1,811,000       | 2,085,000    |  |
| + Selected reservists        | 106,000                 | 611,000         | 767,000      |  |
| + Indiv. ready reservists    | 31,000                  | 202,000         | 233,000      |  |
| Total                        | 412,000                 | 2,673,000       | 3,085,000    |  |
| 4A. VIETNAM PEAK             | 417,000                 | 3,053,000       | 3,470,000    | Actual FY 1969                           |
| 4B. 3.5 MILLION MOBILIZATION |                         |                 |              |  |
| Current active forces        | 274,000                 | 1,811,000       | 2,085,000    | Current active,                          |
| + Selected reservists        | 106,000                 | 661,000         | 767,000      | current reserve,                         |
| + Indiv. ready reservists    | 20,000                  | 202,000         | 222,000      | and E1/E2                                |
| + Additional accessions      |                         | 426,000         | 426,000      | accessions                               |
| Total                        | 400,000                 | 3,100,000       | 3,500,000    |  |
| 5. 4.5 MILLION MOBILIZATION  |                         |                 |              |  |
| Current active forces        | 274,000                 | 1,811,000       | 2,085,000    | Current active,                          |
| + Selected reservists        | 106,000                 | 661,000         | 767,000      | current reserve,                         |
| + Indiv. ready reservists    | 61,000                  | 202,000         | 263,000      | and E1/E2/01/02                          |
| + Additional accessions      | 36,000                  | 1,349,000       | 1,385,000    | accessions                               |
| Total                        | 478,000                 | 4,022,000       | 4,500,000    |  |

Table C.12

## DOD MILITARY PERSONNEL BY GRADE

| Grade     | Current Force | 200K Increment | 1 Million Reserve Call-up | Vietnam Peak | 3.5 Million Mobilization | 4.5 Million Mobilization |
|-----------|---------------|----------------|---------------------------|--------------|--------------------------|--------------------------|
| C/S       | 5             | 5              | 5                         | 5            | 5                        | 5                        |
| O-10      | 32            | 35             | 32                        | 33           | 32                       | 32                       |
| O-9       | 116           | 120            | 116                       | 124          | 116                      | 116                      |
| O-8       | 406           | 442            | 549                       | 493          | 550                      | 551                      |
| O-7       | 562           | 605            | 901                       | 655          | 898                      | 909                      |
| O-6       | 13,780        | 14,666         | 17,756                    | 17,538       | 17,205                   | 19,077                   |
| O-5       | 32,600        | 35,339         | 40,979                    | 43,680       | 40,136                   | 43,001                   |
| O-4       | 50,561        | 54,420         | 67,036                    | 70,068       | 65,784                   | 70,037                   |
| O-3       | 92,041        | 98,275         | 132,314                   | 111,538      | 128,614                  | 141,730                  |
| O-2       | 32,671        | 34,801         | 59,793                    | 75,155       | 55,675                   | 89,919                   |
| O-1       | 34,700        | 39,035         | 53,038                    | 68,853       | 51,608                   | 72,380                   |
| W-4       | 2,134         | 2,487          | 6,584                     | 3,756        | 6,538                    | 6,694                    |
| W-3       | 4,647         | 5,273          | 10,038                    | 3,444        | 9,976                    | 10,185                   |
| W-2       | 7,723         | 8,481          | 17,922                    | 13,681       | 17,734                   | 18,373                   |
| W-1       | 2,466         | 2,794          | 4,782                     | 7,680        | 4,767                    | 4,819                    |
| Total O   | 274,444       | 296,778        | 411,845                   | 416,703      | 399,638                  | 477,828                  |
| E-9       | 13,372        | 14,587         | 16,214                    | 16,987       | 16,214                   | 16,214                   |
| E-8       | 34,106        | 37,458         | 46,271                    | 44,499       | 46,271                   | 46,271                   |
| E-7       | 118,612       | 129,637        | 161,735                   | 150,623      | 161,735                  | 161,735                  |
| E-6       | 204,219       | 221,644        | 288,294                   | 293,278      | 288,294                  | 288,294                  |
| E-5       | 321,345       | 354,152        | 520,461                   | 528,970      | 520,461                  | 520,461                  |
| E-4       | 410,687       | 452,639        | 724,009                   | 745,686      | 724,009                  | 724,009                  |
| E-3       | 327,585       | 362,972        | 422,511                   | 628,472      | 422,511                  | 422,511                  |
| E-2       | 205,049       | 213,232        | 264,607                   | 354,592      | 520,871                  | 1,073,957                |
| E-1       | 162,725       | 189,045        | 216,197                   | 277,613      | 387,040                  | 755,764                  |
| Total E   | 1,797,700     | 1,975,366      | 2,660,299                 | 3,040,720    | 3,087,406                | 4,009,216                |
| Cadets    | 12,956        | 12,956         | 12,956                    | 12,996       | 12,956                   | 12,956                   |
| Total DOD | 2,085,100     | 2,285,100      | 3,085,100                 | 3,470,419    | 3,500,000                | 4,500,000                |

The officer/enlisted mix is already determined for the Selected Reserve. The problem is to determine the officer/enlisted mix for the Individual Ready Reservists who were activated. Since determination of the officer/enlisted mix is also necessary for the mobilization scenarios, a general approach for deriving officer/enlisted mix for force levels was sought.

In order to determine the ideal officer/enlisted mix at different force levels, changes in officer and enlisted strengths during the period 1964-1977 were analyzed. Figure C.1 is a graph of the numbers of officers and enlisted men that existed in each year. It was determined that a linear model that related number of officers to a function of enlisted strength best explained the changes that occurred during this period. The form of this model is:

$$O = a + bD + cE$$

where

- O is the total number of officers
- a is a constant base of officers that exist during a force buildup period
- b is an increment to the base of officers that exists during a period where force levels are declining
- D is a dummy variable that is 0 during a buildup period and 1 during a period of declining force levels
- c is the marginal number of officers required for additional enlisted men
- E is the number of enlisted men.

Data from 1964 to 1973 were used to evaluate the model. This covers the period of greatest force changes experienced during Vietnam. From 1964 to 1968 the military expanded by 860,000 men. During 1969-1973 the armed forces declined by over 1.2 million men.

The proposed model is quite successful at explaining the variations in officer and enlisted strength that occurred during this period. Evaluated separately for 1964-68 and 1969-73 the model yields the following coefficients:

- A. Buildup:           Officers = 130,000 + .086 enlistees
- B. Draw down:       Officers = 160,000 + .088 enlistees

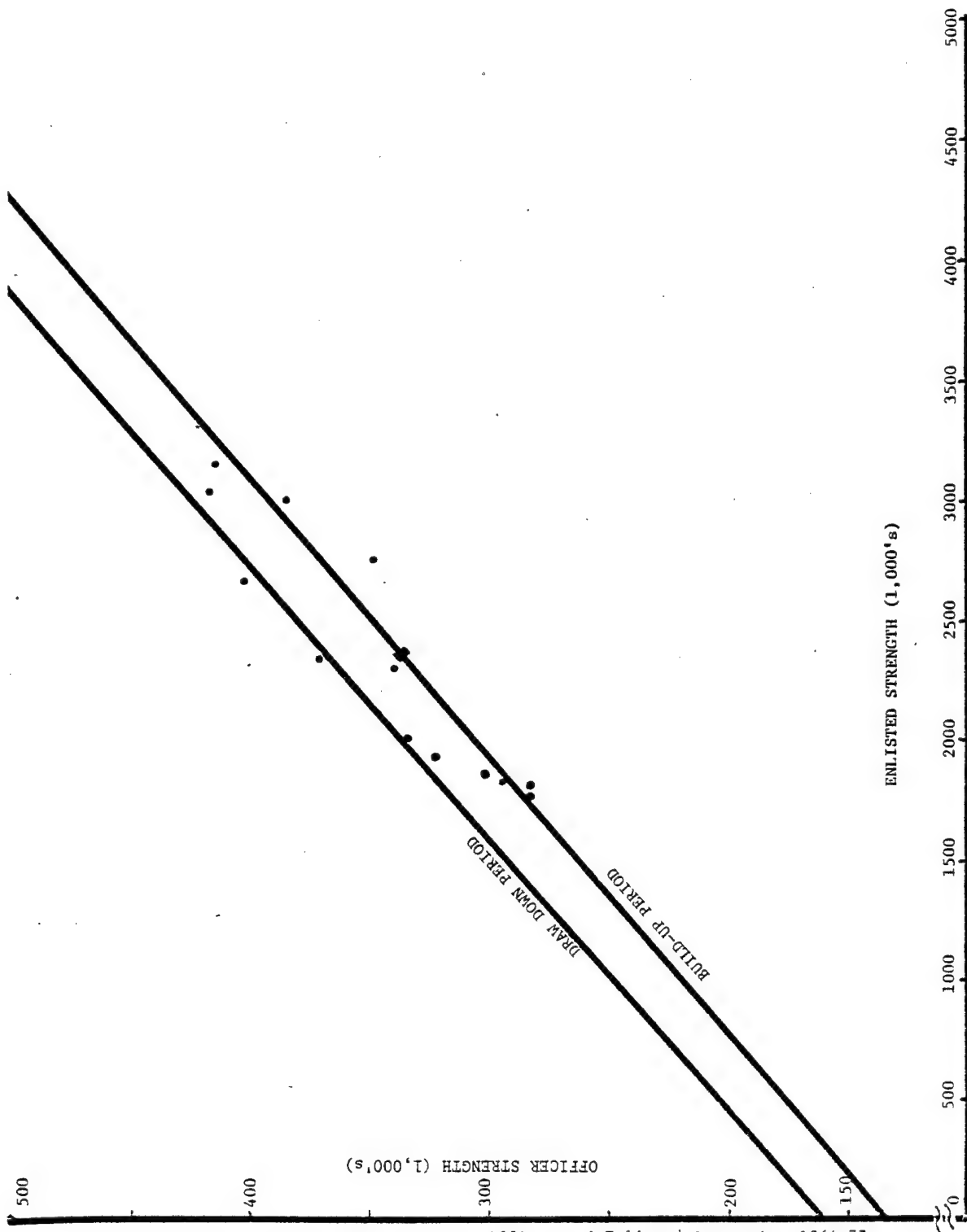


Fig. C.1--Relationship Between Total DOD Officer and Enlisted Strengths, 1964-77



The model is statistically significant over both periods. The model explains 86 percent of the officer/enlisted variation that occurred during the buildup period and 97 percent during the time of declining strengths. The marginal officer requirement (the slope of the lines in Figure C.1 or the enlisted strength coefficient from the model) was statistically the same during both periods, as was hypothesized.

The model estimates that the force of 3.085 million that would result from a Presidential call-up would require 366,000 officers. The mobilization of the Selected Reserve alone, when added to the current active force, contains 380,000 officers. The constraining factor in the Presidential call-up case turns out to be enlisted men. The IRR is very "officer heavy." Over 23 percent of the IRR is officers. Mobilizing all of the enlisted forces available in both the SR and IRR combined with the SR officers yields a force of only 969,000 men. To reach the full one million call-up level, the remaining 31,000 men will have to be IRR officers. Thus, by exercising his call-up authority, the President will have mobilized all of the Ready Reserves except 30,000 IRR officers. The force components are given in Table C.10.

The grade and years of service distributions for the Ready Reserves were acquired from OASD (Reserve Affairs). September 30, 1977 actual strengths were used. A representative matrix of grade and years of service distribution was used for each category (SR and IRR). This is justified because the two matrices used, Army National Guard for the Selected Reserve and Army Reserve for the IRR, make up nearly half of total reserve strength, and are representative of both reserve categories in terms of grade distribution. There would be little, if any, gains in accuracy at the expense of using 12 detailed grade/years of service matrices instead of two. The force totals by grade are given in Table C.11.

The reserves are assumed to have the same proportions of married personnel and the same likelihood of receiving cash allowances by grade as the current active force. The assumption of equal use of cash allowances is reasonable, given that the scenario makes no provision for the location of the additional forces. The assumed proportion of the reserves married is not strictly correct. Selected Reserve officers are somewhat more likely to be married than active force officers in the same grade. IRR personnel are somewhat less likely to be married than active forces. However, making

the necessary adjustments in marital status would affect the totals by under 0.05 percent, or under 25 million dollars. Therefore, the approximation of using the active force percentages was determined reasonable for the purposes of this analysis.

#### Vietnam Peak

The largest military force maintained by the United States in recent times was a Vietnam peak of 3,470,000 during FY 1969. One estimate of the cost of maintaining a force of this size is to cost out this force in terms of today's pay and allowances, RMC, and current appropriations. Performing these calculations will project the manpower costs required to maintain a force that is produced by a gradual buildup, as opposed to a sudden mobilization.

The actual grade and years-of-service distribution were available from OASD(MRA&L) for FY 1969. The breakdown of officers and enlisted men by grade is given in Table C.12. Actual percentages of personnel receiving allowances in cash and in kind were also obtained from OASD(MRA&L) data for FY 1969.

#### 3,500,000 Mobilization

The 3.5 million Vietnam peak force took over 5 years to develop. Another method of reaching this strength as quickly as possible would be a full reserve mobilization with a draft. The purpose here is to evaluate how much a force of 3.5 million is likely to cost when the force structure is derived in an entirely different manner. In this scenario, the force structure is the result of a rapid mobilization as opposed to a slow buildup.

This scenario has several differences from the one million Presidential call-up. The draft is in effect during this mobilization and there no longer is the constraint to use just Ready Reserves. The Defense Department is, therefore, able to select a more optimal mix of troops than would be possible using only reserves.

The 3.5 million mobilization consists of the following force components:

1. Current active forces
2. Selected Reserve
3. Individual Ready Reserve
4. Additional accessions

The active forces are the same as defined in Scenario 1. The same availability factors for the Selected Reserve and IRR as were used in the Presidential

call-up are used here also. The draft will be reinstated in this scenario. This does not mean that all additional accessions necessary to reach the mobilization objective will be draftees. There will be volunteers and people who enlist in order to avoid the draft, in addition to conscriptees.

The next task is to determine the officer/enlisted mix of the mobilized forces. If the active forces and reserves do not contain enough officers for a force of 3.5 million, it will be necessary to have additional officer accessions. The model developed in the previous section indicates that DOD would require 400,000 officers for a force of 3.5 million during a buildup period. Since the active and reserve forces will produce 442,000 officers, not all IRR officers will be mobilized. The strengths by component are given in Table C.11.

Next, the grade structure, years of service, and other personnel characteristics that determine military personnel appropriations must be determined. The active and reserve force grade structure, years of service, marital status, and allowances are determined in the same manner as they were calculated for the one million reserve call-up. The same matrices for distribution of forces by grade and years of service were used for the active forces, SR, and IRR. Reservists are also assumed to have the same allowance and marital status characteristics by grade as the active forces. These assumptions make it possible to determine the cost of all forces except the new accessions.

The additional accessions are all enlisted personnel with under 2 years of service. Because the mobilization occurs quickly, it was determined to make them all E-1s and E-2s. This assumption produces the greatest cost savings for the pay policies evaluated here. If only E-1s and E-2s have their pay reduced, any assumption that reduces the numbers of E-1s and E-2s will reduce the potential savings of alternative pay policies. For purposes of this analysis, it is more desirable to overestimate potential savings than to underestimate them.

Figure C.2 gives a graph of E-1 and E-2 year-end strengths for 1964-77. It can be seen immediately that a great deal of variation exists in the relative proportion of E-1s and E-2s. Usually there are more E-1s than E-2s, but not always. Also, the numbers fluctuate considerably. The numbers of E-1s and E-2s may decline during a buildup or increase during declining force levels. This is understandable since the transition from E-1 to E-2 generally

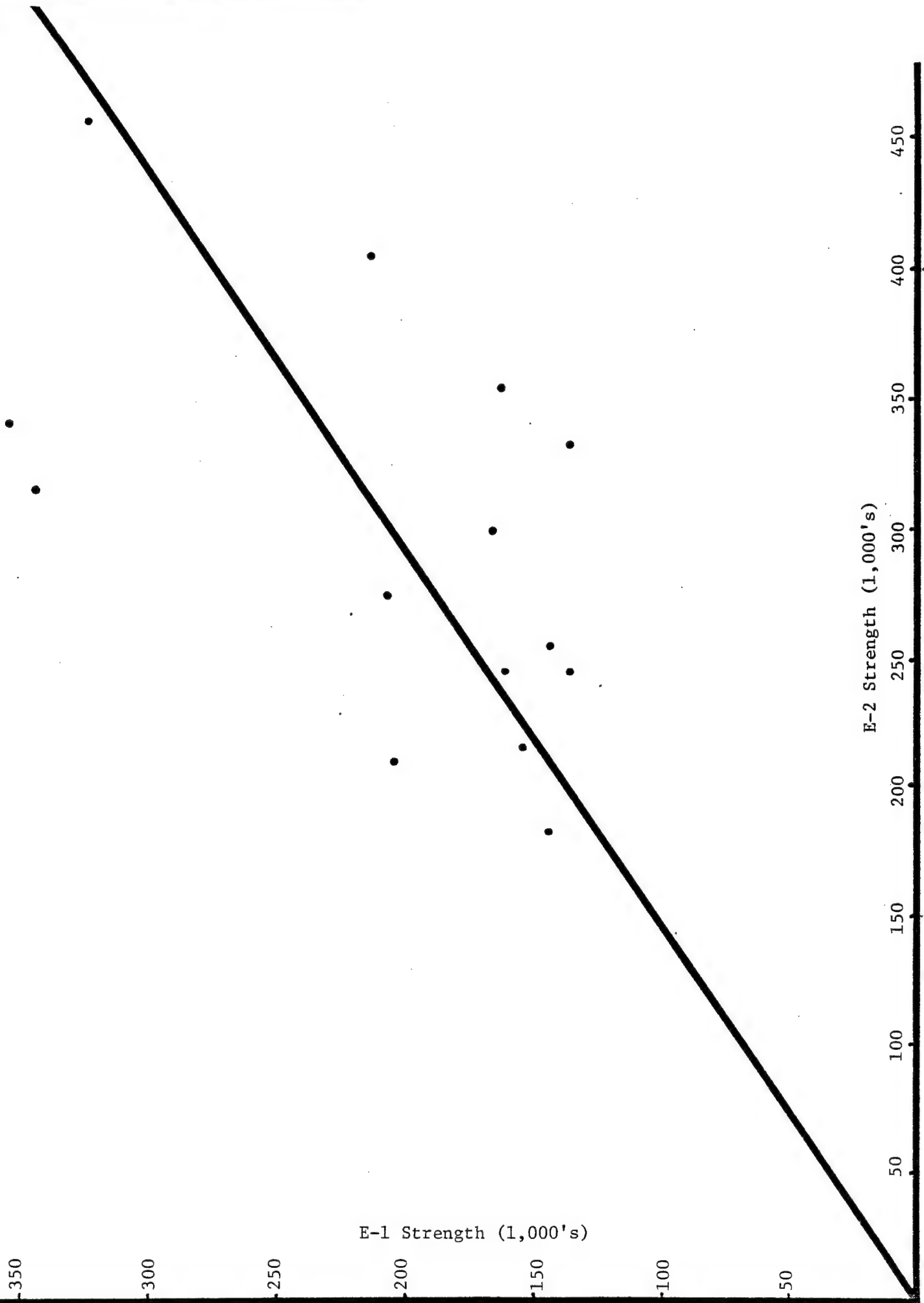


Fig. C.2--Relationship Between Total DOD E-1 and E-2 Strengths, 1964-77  
C-21

takes only a few months. Since it is not known how quickly the new accessions will enter the service or what promotion policies will be in effect in this scenario, additional accessions were classified as E-1s and E-2s in the historical long-term proportions of 60 percent E-2s and 40 percent E-1s. The new accessions are assumed to have the same low marriage rate and high proportion receiving allowances in kind as currently exist in the active forces. The resulting grade distribution of the total force is given in Table C.12.

#### 4.5 Million Mobilization

The 4.5 million mobilization has the same characteristics and force composition. It is a rapid mobilization taking one year or less and involves the current active and reserve forces and the draft. The only difference is that additional accessions have been increased by one million.

The reserves and active forces have the same characteristics that they had in the previous scenario. The only changes in force composition occur in the 1,385,000 additional accessions. The officer/enlisted strength equation developed previously estimates 478,000 officers are required for a force of 4.5 million. Since active and reserve forces only contain 442,000 officers, it will be necessary for the new accessions to contain 36,000 additional officers. It is assumed the military would have little difficulty in recruiting and training these additional officers in a year or less. The feasibility of obtaining 1.35 million additional enlisted men is addressed in an annex to this appendix.

The 1,349,000 additional enlisted accessions are assumed to have the same proportions of E-1s and E-2s as in the 3.5 million mobilization case.

The final force component that requires definition is the additional 36,000 officer accessions. It was decided that all new officers would be O-1s and O-2s for this scenario. The proportion of O-1s and O-2s was derived from historical data. Figure C.3 shows O-1 and O-2 end strengths from 1964-1977. Except for 1967 and 1968, the proportion has remained close to the long-term average proportion (the dashed line). Therefore, the average proportions of 56 percent O-2s and 44 percent O-1s were used to allocate the additional 36,000 officer accessions. The grade distribution of the 4.5 million force is given in Table C.12.

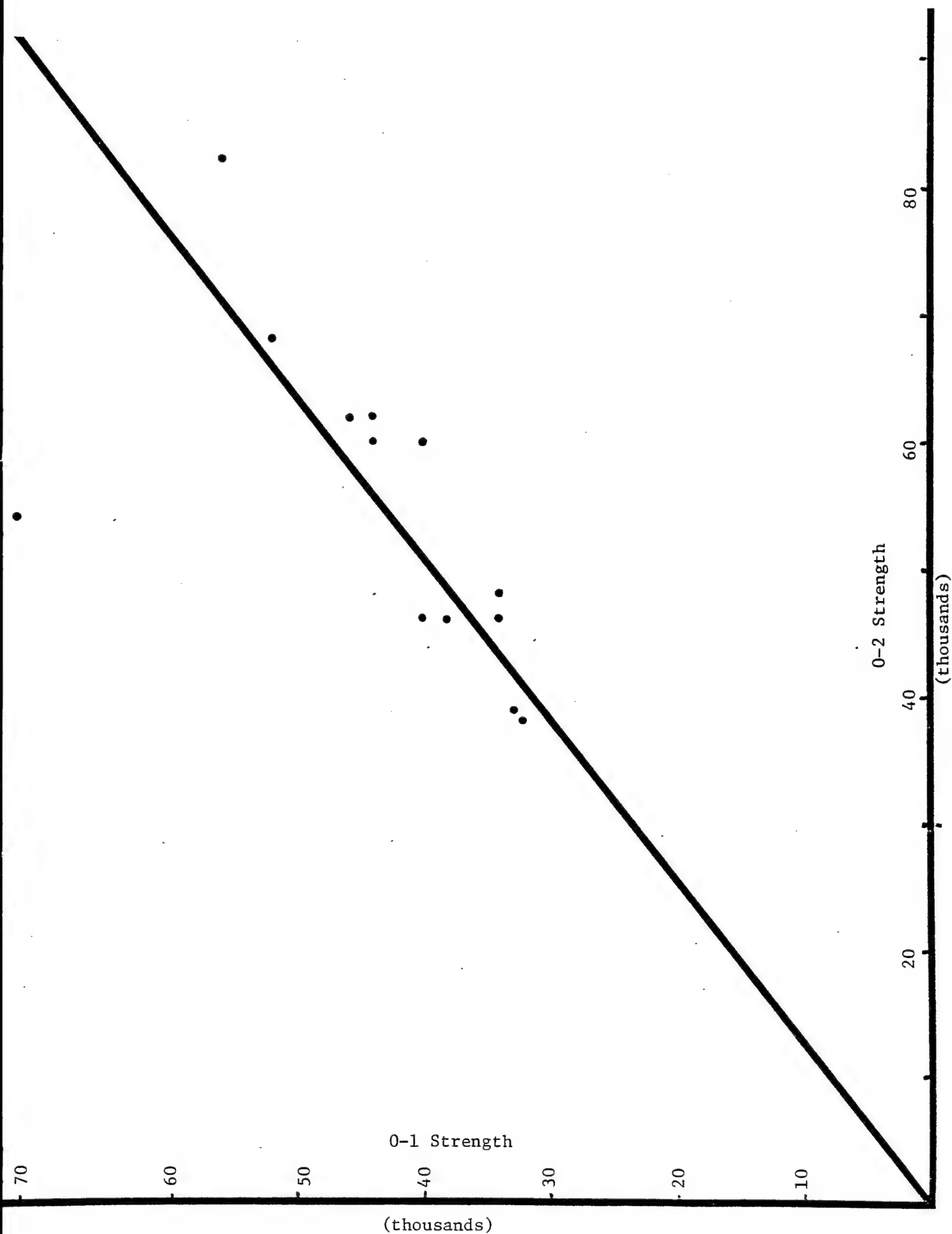


Fig. C.3--Relationship Between Total DOD O-1 and O-2 Strengths, 1964-77

## MILITARY PERSONNEL COSTS UNDER CURRENT PAY POLICY

The final section of this appendix describes how cost estimates were produced for the selected scenarios and pay policies. These cost projections make it possible to estimate the total military personnel savings that could result from different pay policies.

The current active military personnel appropriation data are taken from the Defense Appropriation Act for FY 1978 (PL 95-111, September 21, 1977), as adjusted by the 1 October 1977 pay increase and subsistence supplements. The total DOD budget authority at this time was 25,272 million dollars. This figure corresponds to the current Defense Department military strengths and serves as the cost baseline for all scenario cost estimates.

### Methodology for Making Cost Projections

In order to make cost estimates that reflect the personnel characteristics of the different scenarios, it is necessary to have the budget broken down by service and major budget categories. The Defense Appropriations Act figure does not have this detail. The methodology chosen was to take the Military Personnel Justification documents for the four Services broken down into the appropriate budget categories. Since these figures did not reflect Congressional changes or supplemental increases, the justification amounts were scaled upwards by a constant factor to make the budget totals agree.

The current military personnel appropriation was then broken down into six categories:

1. Officer Basic Pay
2. Enlisted Basic Pay
3. Officer Allowances
4. Enlisted Allowances
5. Cadet Pay and Allowances
6. Other Personnel Costs

Officer and enlisted basic pay are simply the product of the current pay rates and force structure by grade and years of experience. The officer and enlisted allowances categories include basic allowance for subsistence (BAS), basic allowances for quarters (BAQ), subsistence in kind, incentive pay, special pay, bonuses, clothing allowances, and employer social security contributions. Cadet pay and allowances are the payments made to students at the three Service academies. The "Other" category includes such miscellaneous items as PCS costs, savings interest, death benefits, and expenses for capturing deserters. Table C.13 gives cost estimates of the current forces by Services for these budget categories.

The following approach was used to make cost projections:

1. Officer basic pay and enlisted basic pay were calculated based on the grade structure and years of service estimates that were made for each scenario.
2. Officer and enlisted allowances were projected based on officer and enlisted strengths for the current active and reserve forces.
3. Allowances for additional E-1/E-2 accessions (in 3.5 and 4.5 million mobilization cases) were projected based on their marginal allowance costs.
4. Other costs were projected based on total strength.
5. Cadet pay and allowances remain constant.

#### Cost of the 200,000 Increment to Current Forces

The 200,000 force increment involved adding troops to the Army and Air Force only. Since the grade structure and other personnel characteristics remain constant, average pay and allowance costs also remain constant. Cost projections are then made by increasing Army and Air Force budget categories by officer strength, enlisted strength, or total strength. Cadet costs remain constant. The resulting budget increases are \$1,675 million for the Army and \$611 million for the Air Force. The total DOD figure for this scenario is \$27.5 billion (see Table C.14).

#### Cost of a Presidential Call-up

The cost of the Presidential call-up was estimated in the following manner:



Table C.13

FY78 MILITARY PERSONNEL APPROPRIATIONS BY SERVICE  
 (Spread across budget categories is estimated)  
 (millions of constant FY78 dollars)

| Budget category          | Army | Navy | Marine Corps | Air Force | Total DOD |
|--------------------------|------|------|--------------|-----------|-----------|
| Officer basic pay        | 1624 | 1104 | 302          | 1727      | 4,757     |
| Enlisted basic pay       | 4577 | 3286 | 1114         | 3488      | 12,465    |
| Officer allowances       | 461  | 365  | 89           | 526       | 1,441     |
| Enlisted allowances      | 1911 | 1357 | 408          | 1317      | 4,993     |
| Cadet pay and allowances | 24   | 24   | --           | 24        | 72        |
| Other                    | 568  | 340  | 110          | 526       | 1,544     |
| TOTAL                    | 9165 | 6476 | 2023         | 7608      | 25,272    |

1. Total DOD budget categories were used.
2. Officer and enlisted pay was estimated based on the derived grade and year of service distribution.
3. Officer and enlisted strength determine the allowance category estimates.
4. The "Other" category was increased in proportion to total strength.
5. Cadet pay and allowances remain constant.

The assumption that the officer and enlisted allowance categories are proportional to strengths is not precisely accurate; however, it is not totally unrealistic. Basic allowance for quarters makes up only 31 percent of the costs in this category. Subsistence allowances, special pay and allowances, and other costs in this category are primarily a function of strengths and not grade. Whether allowances are given in cash or in kind and marital status have a greater impact on BAQ appropriations than grade. Since the former have already been shown to be the same for the Reserves and active forces, it is then reasonable to assume that average BAQ allowances for the Reserves will be the same.

The total military personnel appropriations were 38 billion dollars when calculated in this manner (see Table C.14).

#### Cost of the Vietnam Peak

The total military personnel appropriations were estimated in the same way for the Vietnam peak force of 3.47 million. The actual base pay was estimated and other categories were scaled according to strengths. The resulting cost was \$40.8 billion, shown in Table C.14.

#### Cost of 3.5 Million Mobilization

The cost of the 3.5 million mobilization was calculated according to the same methodology used for all scenarios. Basic pay was again calculated based on the derived grade and years of service distribution. Officer allowances were scaled to officer strength, "Other" costs were scaled to total strength, and cadet pay and allowances remain constant. The current active and reserve forces' allowances were also scaled in proportion to strength. The only change from the previous calculations was to determine the marginal personnel costs per new accession. Since draftees and new

Table C.14

TOTAL DOD ACTIVE MILITARY PERSONNEL APPROPRIATIONS  
UNDER ALTERNATIVE COMPENSATION POLICIES AND SCENARIOS  
(Billions of constant FY78 dollars)

| Scenario                     | Total strength (millions) | Current pay | Minimum wage to E-1/E-2s (allowances deducted) | Poverty wage to E-1/E-2s (allowances extra) |                       | Korean War Real Pay to E-1/E-2s (allowances extra) |
|------------------------------|---------------------------|-------------|--|---|-----------------------|--|
|                              |                           |             |  | (allowances extra)                          | (allowances deducted) |  |
| 1. Current active forces     | 2.1                       | 25.3        | 24.9   | 24.6  | 24.0                  | 24.3   |
| 2. 200,000 Increment         | 2.3                       | 27.5        | 27.1   | 26.8  | 26.2                  | 26.5   |
| 3. Presidential call-up      | 3.1                       | 38.0        | 37.5   | 37.0  | 36.3                  | 36.7   |
| 4A. Vietnam peak             | 3.5                       | 40.8        | 40.1   | 39.6  | 38.6                  | 39.1   |
| 4B. 3.5 Million mobilization | 3.5                       | 40.9        | 39.9   | 39.1  | 37.7                  | 38.4   |
| 5. 4.5 Million mobilization  | 4.5                       | 49.2        | 47.2   | 45.7  | 42.9                  | 44.3   |

recruits would receive lower than average BAQ cash awards, no enlistment or reenlistment bonuses or special pays, it was deemed inappropriate to scale their allowances by the average enlisted allowance category cost. Therefore, the allowance budget category items were analyzed and four items were identified that would vary significantly as the number of E-1s and E-2s increased. These were:

1. BAQ
2. Subsistence
3. Employer's contribution to Social Security
4. Basic clothing maintenance allowance

For BAQ the expected cash value of BAQ was calculated. The expected value of BAQ for a new accession is \$347. This is because most E-1/E-2s receive only partial cash BAQ. The average subsistence payment for a new accession is \$886, assuming the same percentages receive cash or in kind subsistence. Social Security contributions cost \$308 per E-1/E-2. Basic clothing maintenance allowance during FY 1978 is \$61 per accession. The total marginal allowance for an average E-1/E-2 is \$1602. This is considerably less than the \$2777 cost of the average enlisted man.

The resulting cost of the 3.5 million mobilization is \$41.5 billion (see Table C.14).

#### 4.5 Million Mobilization

The 4.5 million mobilization was estimated in the same way as the 3.5 million mobilization. The total cost is 49.2 billion dollars (see Table C.14).

#### Cost in Terms of Current Pay and Tax Advantage (RMC)

The tax advantage for different scenarios was computed by scaling current tax advantage in proportion to basic pay. Computation of the actual tax advantage is dependent on a relationship of basic pay, allowances, family size, the Social Security rate and income tax rates. However, scaling it in proportion to pay is reasonable since basic pay determines the marginal tax rate, and for the typical military salary, the marginal tax rate is approximately the average. RMC figures are given in Table C15.

Table C.15  
TOTAL DOD MILITARY PERSONNEL APPROPRIATIONS  
INCLUDING TAX ADVANTAGE (RMC)  
(Billions of constant FY78 dollars)

| Scenario                     | Total strength (millions) | Current pay | Minimum wage to E-1/E-2s (allowances deducted) | Poverty wage to E-1/E-2s (allowances deducted) |                       | Korean War Real Pay to E-1/E-2s (allowances extra) |
|------------------------------|---------------------------|-------------|--|--|-----------------------|--|
|                              |                           |             |  | (allowances extra)                             | (allowances deducted) |  |
| 1. Current active forces     | 2.1                       | 26.8        | 26.3   | 26.0   | 25.4                  | 25.6   |
| 2. 200,000 Increment         | 2.3                       | 29.2        | 28.6   | 28.4   | 27.7                  | 27.9   |
| 3. Presidential call-up      | 3.1                       | 40.3        | 39.6   | 39.3   | 38.4                  | 38.7   |
| 4A. Vietnam peak             | 3.5                       | 43.1        | 42.2   | 41.8   | 40.7                  | 41.1   |
| 4B. 3.5 Million mobilization | 3.5                       | 43.3        | 42.0   | 41.4   | 39.8                  | 40.3   |
| 5. 4.5 Million mobilization  | 4.5                       | 52.2        | 49.5   | 48.3   | 45.3                  | 46.2   |

## MILITARY PERSONNEL COSTS UNDER DIFFERENT PAY POLICIES

The impact of different pay policies was analyzed for each scenario. The three pay policies described earlier in this Appendix that involved substantial reductions in terms of pay and allowances to E-1s and E-2s were evaluated. These policies are:

1. Pay and allowances replaced with a minimum wage, with the cost of allowances deducted from the wage.
2. Basic pay set at the poverty level, with current allowances added to pay.
3. Pay and allowances replaced with a poverty level wage, with the cost of allowances deducted from the wage.

Under the first and third pay options E-1s and E-2s pay for all their allowances out of their basic pay. The cost of quarters in kind is not included in the military personnel budget. However, since these two pay policies result in Defense Department savings for quarters in kind, it is appropriate to include these savings in the cost calculations for E-1s and E-2s.

Table C.16 illustrates the calculation of the cost savings produced by each of the alternative pay policies for an E-1. The first column gives the personnel costs of an average E-1. The personnel characteristics of an average E-1 are given in the first section of this Appendix. The total cost of an average E-1 is currently \$6559. By subtracting the employer's contribution to Social Security (currently 6.05 percent of basic pay) from the totals the cost figures in Table C.9 can be derived. The quarters allowance is divided into its cash and in kind components so that the segment of costs included in the current military personnel appropriations can be compared. The subtotal gives the costs in terms of the current military personnel budget.

The second through the fifth columns illustrate the calculation of the cost savings produced by pay alternatives. The minimum wage rate would result in a savings of \$717 per year for the average E-1. The policy of poverty wages with allowances deducted would result in \$3105 savings per year. Table C.17 gives the same information for the average E-2. The savings are greater for an E-2 under each of the policy options.

Table C.16

## PERSONNEL COSTS FOR AN AVERAGE E-1

|  | Current pay | Minimum wage<br>(allowances<br>deducted) | Poverty wages         |                          | Korean War<br>real pay to<br>E-1/E-2s<br>(allowances<br>extra) |
|--|-------------|--|-----------------------|--------------------------|--|
|  |             |  | (allowances<br>extra) | (allowances<br>deducted) |  |
| <u>Military personnel appropriations</u>           |             |  |                       |                          |  |
| Basic pay  | 4770        | 5512                                     | 3262                  | 3262                     | 2316   |
| BAS (cash and in kind)                             | 879         | -  | 879                   | -                        | 879  |
| Cash BAQ   | 269         | -  | 269                   | -                        | 269  |
| Employer's Social Security<br>contribution         | 289         | 333                                      | 195                   | 195                      | 140  |
| TOTAL  | 6207        | 5845                                     | 4605                  | 3457                     | 3604   |
| <u>Other appropriations</u>                        |             |  |                       |                          |  |
| Quarters in kind                                   | 355         | -  | 355                   | -                        | 355  |
| TOTAL  | 6562        | 5845                                     | 4960                  | 3457                     | 3959   |
| Savings over current pay policy                    | -           | 717                                      | 1602                  | 3105                     | 2603   |
| Tax advantage (for cash and<br>in-kind allowances) | 334         | 0  | 175                   | 0                        | 70   |
| Savings including tax advantage                    | -           | 1051                                     | 1761                  | 3439                     | 2867   |

Table C.17

## PERSONNEL COSTS FOR AN AVERAGE E-2

| Military personnel appropriations                  | Current pay | Minimum wage<br>(allowances<br>deducted) | Poverty wages         |                          | Korean War<br>real pay to<br>E-1/E-2s<br>(allowances<br>extra) |
|--|-------------|--|-----------------------|--------------------------|--|
|  |             |  | (allowances<br>extra) | (allowances<br>deducted) |  |
| Basic pay  | 5317        | 5512                                     | 3278                  | 3278                     | 2388   |
| BAS (cash and in kind)                             | 893         | -  | 893                   | -                        | 893  |
| Cash BAQ   | 405         | -  | 405                   | -                        | 405  |
| Employer's Social Security<br>contribution         | 322         | 334                                      | 198                   | 198                      | 145  |
| TOTAL  | 6937        | 5846                                     | 4774                  | 3476                     | 3831   |
| Other appropriations                               |             |  |                       |                          |  |
| Quarters in kind                                   | 265         | -  | 265                   | -                        | 265  |
| TOTAL  | 7202        | 5846                                     | 5039                  | 3476                     | 4096   |
| Savings over current pay policy                    | -           | 1356                                     | 2163                  | 3726                     | 3106   |
| Tax advantage (for cash and<br>in-kind allowances) | 370         | 0  | 183                   | 0                        | 79   |
| Savings including tax advantage                    | -           | 1726                                     | 2350                  | 4096                     | 3397   |



The minimum wage policy saves \$1356 a year per E-2. The poverty wage (allowances included) saves \$2163, and the poverty wage with allowances deducted saves \$3726 per year.

The total savings under each policy can be calculated from multiplying the savings from Tables C.16 and C.17 by the appropriate numbers of E-1s and E-2s in each scenario. The numbers of individuals in these grades is given in Table C.12. Subtracting the total savings from the current military personnel costs that were derived in the previous section yields the military personnel costs for each of the policy options. These costs are also given in Table C.14. The maximum savings are \$6.3 billion for the poverty wage with allowances deducted under the 4.5 million mobilization scenario.

A comparison of RMC costs was also derived for each of the pay policies. The RMC cost savings were calculated in a manner similar to the estimates of military personnel appropriations savings. For each of the pay policies analyzed (including the current pay policy), the tax advantage was computed using the 1977 standard tax schedules, current Social Security rates, and actual FY 1978 data on number of dependents and the split between cash and in-kind allowances.

The calculations for an average E-1 are given on the bottom two lines of Table C.16. Under current pay policies, an average E-1 will expect to gain about \$334 in tax advantage from having untaxed quarters and subsistence allowances.\* Under the minimum wage policy or a poverty wage with allowances deducted from pay, there would be no tax advantage because the only compensation received is basic pay, which is taxable income. The bottom lines in Table C.17 give the savings over the current pay policy, including the tax advantage, for an average E-2.

The total RMC savings in each scenario were estimated by multiplying the average E-1 and E-2 savings (per person) times the E-1 and E-2 strengths under the different scenarios. These savings were then subtracted from the

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\* If all allowances were given in cash, the tax advantage would rise to \$423.

RMC costs estimated for each scenario under the current pay policy. These figures are reflected in Table C.15. The maximum RMC savings are \$6.9 billion for the policy in which wages are set at the poverty level with allowances deducted, under the 4.5 million mobilization scenario.

#### Extension of Pay Reductions to Additional Personnel

All pay policies considered so far that have involved pay reductions have limited those reductions to E-1s and E-2s. Additional savings are, of course, possible if pay reductions were applied to additional personnel as well. To illustrate this possibility, this section considers reducing the basic pay of all enlisted personnel in the grades E-1 through E-4 who have less than 4 years of service and all officers in the grades O-1 and O-2. We assume here that basic pay is reduced to the levels that prevailed during the Korean War (1952), adjusted to FY 1978 dollars. An E-1 in Korea (with less than 2 years service) received \$2316 in FY78 dollars (compared to \$4770 currently). An O-2 with less than 2 years service in 1952 received \$7221 (in 1978 dollars), compared to \$10,130 currently. Current pay rates range from \$2200 to \$5600 above the adjusted Korean War rates.

Table C.18 gives the Military Personnel appropriations under current pay policy and under the Korean War pay rates. For purposes of comparison, the Korean War rates are shown as applied both to E-1/E-2s only and to the additional personnel as well. The force scenarios are the same ones that have been used previously. Reduction of pay to E-1s and E-2s would save from \$1.0 billion to \$4.9 billion, depending on the scenario. The figures would fall between the two poverty wage calculations given in Table C.13.

A pay reduction for E-1s through E-4s and O-1s and O-2s produced the greatest savings. This is understandable because this policy reduces pay to the most individuals. For the 4.5 million mobilization, the savings would be \$7.2 billion over the current pay policy.

Table C.18

MILITARY PERSONNEL APPROPRIATIONS WITH REAL KOREAN WAR  
PAY RATES TO JUNIOR PERSONNEL

| Scenario                        | Total<br>strength | Current<br>pay | 1952 Basic pay (FY78 dollars) |                                  |
|---------------------------------|-------------------|----------------|-------------------------------|----------------------------------|
|                                 |                   |                | to E-1/E-2s                   | to E-1 thru E-4s<br>0-1 and 0-2s |
| 1. Current active<br>forces     | 2.1               | 25.3           | 24.3                          | 22.5                             |
| 2. 200,000 increment            | 2.3               | 27.5           | 26.5                          | 24.5                             |
| 3. Presidential<br>call-up      | 3.1               | 38.0           | 36.7                          | 34.5                             |
| 4A. Vietnam peak                | 3.5               | 40.8           | 39.1                          | 35.4                             |
| 4B. 3.5 million<br>mobilization | 3.5               | 40.9           | 38.4                          | 36.2                             |
| 5. 4.5 million<br>mobilization  | 4.5               | 49.2           | 44.3                          | 42.0                             |

Annex C-1

STATUS OF THE SELECTIVE SERVICE SYSTEM

(Portions extracted from "The Position of the Department of Defense on the Standby Draft," Kenneth J. Coffey, DOD Task Force on AVF Assessment)

Since the termination of monthly induction calls in December of 1972, the Selective Service System has been progressively demobilized. Continuing registration of 18-year olds terminated in 1975, thus removing a large share of the Service's ongoing mission, especially at the local board level. Since that time, the local board system has been completely obviated and the regional and national headquarters severely cut back. A new concept of operation involving the once-a-year registration of eligible young men for possible induction and including the classification and examination of these individuals was scheduled for implementation in 1976, but the Executive Orders for such a program were never issued and resulted in yet a further reduction in both the Service's mission and budget.

In the opinion of the Acting Director of the Selective Service System, an emergency manpower procurement system could have been established which would have had the capability of identifying potential draftees and mailing out 150,000 draft notices if an additional \$15 million supplement could be included in the system's budget. This system would preclude the reactivation of the various local boards and regional headquarters.

Otherwise, the prospects of the Selective Service System's capability to meet mobilization requirements are slim. The proposed Post Office registration of eligible young men is not considered viable or feasible. Reconstituting the system to the WWII-through-Vietnam level would be a monumentally challenging task requiring the establishment of 56 state headquarters with 562 supervisory/management personnel; 626 local board administrative offices with a compensated force of 1,587; and 3,018 local boards with some 15,000 volunteer members.\*

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\* U.S. Congress, House of Representatives, Committee on Armed Services, Hearings on the Selective Service System, 27 Jan - 23 Feb 1976, p 41.

The Acting Director has stated that the System, currently in a "deep standby" status, is not capable of meeting the newly established objective of 100,000 inductees within an M+60 day time frame and 650,000 inductees by M+180. However, the recent 40 percent increase in the FY79 appropriation over the FY78 appropriation (\$9.5 million FY79, \$6.6 million FY78) will permit measures to be taken which will provide adequate capability to meet the new requirements.

Moving the system out of "deep standby" into a higher state of readiness will be accomplished by: performing several required logistical and administrative actions prior to a mobilization call; developing streamlined procedures for immediate use after mobilization; and oiling the mechanism necessary to reestablish the local and appeal board infrastructure. This last task requires the greatest effort, involving the contact of former local and appeal board members, still eligible in terms of age and length of service, to determine if they will accept reappointment to the boards. The recruiting and training of these and other (new) local and appeal board members during standby will significantly reduce the workload and time required after M-day to rebuild the System.\*

Further, enhanced use of computer operations — notably the Emergency Military Manpower Procurement System (EMMPS), — effective utilization of available, trained Reserve military personnel in the System, and intensified readiness training efforts will substantially aid in meeting the new objectives.

A secondary consideration for the Selective Service System is how long it would take an improved Selective Service System to reach the 3.5 million and 4.5 million manpower levels considered elsewhere in this study. In order for the mobilization scenarios to be feasible, these manpower levels must be capable of being reached within one year.

The Defense Department has told Congress that should a full mobilization occur, 650,000 new recruits would be required within 6 months.\*\*

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\* Testimony of Mr. Robert E. Shuck, Acting Director, Selective Service System, before the Subcommittee on Housing and Urban Development 15 Feb 1978.

\*\* DOD Authorization for FY 1978 Appropriations, Hearings on Military Posture and H.R. 5068, p 10.

DOD has proposed a Selective Service System design that will meet this objective. This goal is to be achieved by 350,000 draftees and assumes a continuation of volunteer recruiting rates will produce 300,000 volunteer recruits during the 6 months. Current active forces will remain in the service during a full mobilization. At this rate, new accessions will reach 1.3 million within one year. Since there is a startup period involved in producing 350,000 draftees in 6 months, it is expected that more than 350,000 draftees can be processed in the second 6 months. Therefore, the 1,349,000 additional enlisted accessions required to reach the 4.5 million mobilization scenario could be attained in one year, given implementation of the DOD proposal.

Appendix D

STATUTORY AUTHORITIES FOR INCREASING ACTIVE STRENGTHS

## Appendix D

### STATUTORY AUTHORITIES FOR INCREASING ACTIVE STRENGTHS

This appendix documents statutory military call-up and related authorities for increasing and employing the strength of US armed forces.

Sections of titles 10 and 34, US Code, grant broad authority to the President to order the militia, including the National Guard, to active duty even during periods when no formal state of war or emergency exist. However, Presidential authorities for call-up of Reserve components short of national emergency are limited. This appendix provides a compendium of all authorities for recall of reserves to active duty and retention of active members on active duty beyond expiration of term of service. The sections of titles 10 and 34 pertaining to these areas are summarized, in the following material, under five broad categories: general authorities, active duty for training, formal declaration of war or national emergency, internal or domestic emergencies, and other call-up authorities. A summary of the War Power Resolution (50 USC 1541-1548) is also included. The complete sections of the US Code are quoted in the annex.

Short of war, international emergency or domestic emergency, the principal tool available to the President for partial mobilization is 10 USC 673b. As detailed in the material which follows, this section permits the President to call to active duty involuntarily, for not more than 90 days, any unit or individual member of the Selected Reserve. Not more than 50,000 members may be on active duty at any one time under this authority. Limited numbers of the Reserve component members may be called involuntarily under other authorities and for other purposes (i.e., training (various sections), 15 days active duty to test readiness (10 USC 672b),



and unsatisfactory fulfillment of Reserve obligations (10 USC 673a); however, only 10 USC 673b provides for a call-up of combat-capable forces for an extended period. Enacted on May 14, 1976 as PL 94-286, this authority was expressly intended to provide flexibility for use of the Reserves without resorting to a national emergency declaration and its attendant additional implications. It was envisioned by the Congress that the authority would be used for minor situations requiring short-term capabilities or during periods of increasing international tension before a major confrontation and emergency declaration.\*

It should be noted that 673b expressly excludes members called under its authority from computation of authorized strength; thus, additional end-year strength authorizations under 10 USC 138(c)(1) would not be required if the 50,000 were held through the end of a fiscal year; however, supplemental appropriations or Congressional reprogramming authority would be needed. Commitment of these forces would also be subject to Section 1, PL 93-148, November 7, 1973, the War Powers Resolution (50 USC 1541-1548) which is discussed further below.

Given a declaration of national emergency by the President, the principal authority available for rapid buildup of the Armed Forces is 10 USC 673 which provides for call-up of up to 1,000,000 members of the Ready Reserve for not more than 24 consecutive months. Under this authority, the President is required to report to the Congress every six months on the necessity for retaining these forces on active duty. Increased end-year strength authorization under 10 USC 138 and supplemental appropriations would also be required. Commitment of these forces (as well as other active forces) to hostilities, or even their deployment to foreign nations in substantial numbers, would be further subject to the War Powers Resolution (50 USC 1541-1548) which generally limits such commitment to 60 days without specific authority from the Congress.

With respect to retention or active duty beyond expiration of term of service, 10 USC 671 requires a declaration of war except that the

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\*Senate Report No. 94-562, December 15, 1975.

President may extend members for not more than 6 months when Congress is not in session.

#### GENERAL AUTHORITIES

10 USC 263 provides the basic policy for ordering to active duty in Federal service and for retaining as long as needed members of the Army and the Air National Guards, together with units of other Reserve components necessary for a balanced force, whenever Congress determines that more units and organizations are needed for national security than are in the regular components.

34 USC 102 describes the general policy for call-up of Army and Air National Guards to maintain a balanced force.

#### ACTIVE DUTY FOR TRAINING

10 USC 270 prescribes training requirements for Ready Reserves:

10 USC 270(a) provides that, except as provided in regulations by the Secretary of Defense, each person who is inducted, enlisted or appointed in an armed force after August 9, 1955, and who becomes a member of the Ready Reserve is required to (1) participate in at least 48 scheduled drills or training periods during each year and serve on active duty for training of not less than 14 days (exclusive of travel time) during each year and (2) serve on active duty for training not more than 30 days during each year.

10 USC 270(b) prescribes that a member of the Ready Reserve who fails in any year to perform satisfactorily the training duty prescribed in 270(a) may be ordered to perform additional active duty for training for not more than 45 days.

10 USC 270(c) provides that any member of the Army National Guard or the Air National Guard who fails to perform satisfactorily the training duty prescribed under law may be ordered, as a Reserve of the Army or a Reserve of the Air Force, to perform additional active duty for training for not more than 45 days.

10 USC 6485(b) provides that any member of the Fleet Reserve or the Fleet Marine Corps Reserve may be required to perform not more than 2 months' active duty for training in each 4-year period in time of peace.

10 USC 511(d). A non-prior-service person who is under 26 years of age, who is qualified for induction for active duty in an armed force and who is not under orders to report for induction into an armed force, may

enlist in the Army National Guard or the Air National Guard, or as a Reserve for a term of 6 years. Each person so enlisted shall perform an initial period of active duty for training of not less than 12 weeks to commence within 180 days after the date of enlistment.

#### FORMAL DECLARATION OF WAR OR NATIONAL EMERGENCIES

10 USC 511 spells out the terms of enlistment for Reserve components: enlistments as Reserves are for terms prescribed by the Secretary concerned. An enlistment at the beginning or entered into during a war or national emergency continues in effect, unless sooner terminated by the Secretary concerned, until the expiration of 6 months after the end of that war or emergency.

10 USC 519 specifies that temporary enlistments of persons at least 18 years of age in an armed force entered in time of war or of emergency declared by Congress shall be for duration of the war or emergency plus 6 months.

10 USC 671(a) extends the period of active service of any members of the armed force for the duration of any war in which the United States is engaged and for 6 months thereafter, unless terminated at an earlier date by the Secretary concerned.

10 USC 671(b) pertains to the extension of service when Congress is not in session. Subsection (a) specifies that when the President determines that the national interest so requires, if Congress is not in session, he may authorize the Secretary of Defense to extend for not more than 6 months the terms of service of any members in the Armed forces that expire before the 30th day after Congress next convenes or reconvenes. Subsection (b) prescribes that an extension under this section continues until the 60th day after Congress convenes or reconvenes or until the expiration of the period of extension specified by the Secretary of Defense, whichever occurs earlier, unless sooner terminated by law or Executive order.

10 USC 672(a). In time of war or of national emergency declared by Congress, or when otherwise authorized by law, an authority designated by the Secretary concerned may order any unit, and any member not assigned to

a unit of a reserve component under the jurisdiction of that Secretary to active duty (other than for training) for the duration of the war or emergency and for 6 months thereafter. However —

(1) a member on an inactive status list or in a retired status may not be ordered to active duty under this subsection unless the Secretary concerned, with the approval of the Secretary of Defense in the case of the Secretary of a military department, determines that there are not enough qualified Reserves in an active status or in the inactive National Guard in the required category who are readily available; and

(2) a member of the Standby Reserve may not be ordered to active duty under this subsection unless the Director of Selective Service determines that the member is available for active duty.

10 USC 673 provides, in essence, that "in time of national emergency declared by the President after January 1, 1953 ..." a designated authority may order Ready Reserve units and members not assigned to units to active duty for not more than 24 consecutive months. Under this section the President may order up to 1,000,000 men to active duty. This authority was enacted in 1952.

10 USC 674 provides that units and members in the Standby Reserve may be ordered to active duty (other than for training) only as provided in section 672 of this title. In time of emergency, no unit or any member of the Standby Reserve may be ordered to active duty (other than for training) unless the Secretary concerned determines that there are not enough of the required kinds of units in the Ready Reserve that are readily available and no other member may be ordered to active duty as an individual without his consent unless the Secretary concerned determines that there are not enough qualified members in the Ready Reserve in the required category who are readily available.

10 USC 675 provides that a member of the Retired Reserve may be ordered to active duty as provided in section 672(a) of this title.

10 USC 677 prescribes the ordering as individuals to active duty of officers of the Reserve components who are not members of units. In such cases, the services of qualified and available reserve officers in all grades shall be used according to the needs of the branches, grades, or specialities concerned.

10 USC 6485(a) authorizes the call-up to active duty of a member of the Fleet Reserve or the Fleet Marine Corps by competent authority in time of war or national emergency declared by Congress, in time of national emergency declared by the President, and when otherwise authorized by law.

#### INTERNAL OR DOMESTIC EMERGENCY

10 USC 331 enables the President, upon the request of a State legislature or its governor if the legislature cannot be convened, to call into Federal service such of the militia of the other States ... "and use such of the armed forces as he considers necessary to suppress (an) insurrection" against the government of the concerned State.

10 USC 332 enables the President to call into Federal service the militia of any State (as well as use U.S. armed forces) "whenever the President considers that unlawful obstructions, combinations, or assemblages, or rebellion against the authority of the United States, make it impracticable to enforce the laws of the United States ... by the ordinary course of judicial proceedings ...".

10 USC 333 empowers the President to use the militia (or armed forces) to suppress in a State any insurrection, domestic violence, unlawful combination or conspiracy which interferes with the execution of State or Federal law or abridges Constitutional rights, privileges, immunities or protections.

10 USC 3500 empowers the President to call into Federal service members and units of the Army National Guard in such numbers as he considers necessary to repel invasion, suppress rebellion, or execute US laws.

10 USC 8500 empowers the President to call into Federal service members and units of the Air National Guard in such numbers as he considers necessary to repel invasion, suppress rebellion, or execute US laws.

#### OTHER CALL-UP AUTHORITIES

10 USC 672(b). At any time, an authority designated by the Secretary concerned may order any unit, and any member not assigned to a unit in a reserve component under the jurisdiction of that Secretary, to active duty for not more than 15 days a year. However, units and members

of the Army or the Air National Guard may not be ordered to active duty without the consent of the governor of the State or Territory, Puerto Rico, or the Canal Zone, or the commanding general of the District of Columbia National Guard.

10 USC 672(d). At any time, an authority designated by the Secretary concerned may order a member of a reserve component to active duty, or retain him on active duty, with the consent of the member. However, a member of the Army or Air National Guard may not be ordered to active duty without the consent of the governor or other appropriate authority of the State, Territory, Puerto Rico, the Canal Zone, or the District of Columbia.

10 USC 673(a) empowers the President to order to active duty certain members of the Ready Reserve who have not fulfilled the statutory reserve obligation (normally 6 years) and who have not served for 24 months on active duty. Members subject to this provision are: (1) those not assigned to a unit of the Ready Reserve and (2) those assigned but not participating satisfactorily in a unit of the Ready Reserve. These members may be required to serve until their active duty time equals 24 months. If enlistment or other period of service would expire before he has served the required period, it may be extended until he has served the required period. The President may use this authority at any time; no state of war or emergency is required.

10 USC 673(b), notwithstanding any other law, empowers the President to determine it is necessary to augment active forces for operational missions and to authorize the involuntary call-up of Selected Reserve units (and members not assigned to units) by the Secretary of Defense for not more than 90 days without a declaration of war or national emergency. It prohibits the call-up of reserves to perform functions relating to insurrection or enforcement of law within the States or to assist Federal or State Governments in time of disaster, accident or catastrophe (10 USC 331-336, 3500, 8500). It limits the number called up under this section to not more than 50,000 members at any one time. Members called up under this section are excluded from computation of active duty strength and grade structure.

10 USC 678 pertains to a Reserve ordered to active duty with consent of the member under section 672(d) of this title in connection with organizing, administering, recruiting, instructing, or training the reserve components. To assure that a Reserve so ordered to duty receives periodic refresher training, the Secretary concerned may detail him to duty with any armed force, or otherwise as the Secretary sees fit.

10 USC 3495 provides that members of the Army National Guard of the United States are not in active Federal service except when ordered thereto under law.

10 USC 3496 empowers the President, with their consent, to order commissioned officers of the Army National Guard to active duty in the National Guard Bureau. The number of officers of the Army National Guard in any grade below brigadier general who are ordered to active duty may not be more than 40 percent of the number of officers of the Army in that grade authorized for duty in that Bureau.

10 USC 265 authorizes, in such numbers, grades, and assignments as the Secretary concerned may prescribe, each armed force to have officers of its reserve components on active duty (other than for training) at the seat of government, and at headquarters responsible for reserve affairs, to participate in preparing and administering the policies and regulations affecting those reserve components.

10 USC 2105 empowers the Secretary of a military department to order an advanced ROTC cadet (who must also be a member of a Reserve component) to active duty for a period of up to 2 years if that cadet does not complete the course of instruction or declines to accept a commission.

## WAR POWERS

50 USC 1541(c) describes the warmaking powers of the President mentioned in the Constitution. The constitutional powers of the President as Commander-in-Chief are exercised only pursuant to (1) a declaration of war, (2) specific statutory authorization, or (3) a national emergency created by attack on the United States.

50 USC 1542 directs the President in every possible instance to consult with Congress before committing US Armed Forces to hostilities or situations where hostilities may be imminent. After commitment has been made, the President should consult regularly with Congress until the Armed Forces are no longer engaged in hostilities or have been removed from such situations.

50 USC 1543 contains a reporting requirement obligating the President to submit a written report to Congress when, without prior declaration of war by Congress, he takes actions committing US Armed Forces. The section stipulates the circumstances requiring such a report, prescribes its form, specifies the nature of its contents, and states the timing of its submission. A purpose of this requirement is to cause the President, in the process of decisionmaking, to take into account the legal and constitutional role of Congress in warmaking.

10 USC 1544 provides specific procedures for consideration by Congress when a report is submitted pursuant to 10 USC 1543, receiving a report when Congress is not in session, denying the President the authority to commit US Armed Forces for more than 60 days without further specific Congressional approval, and for termination of the President's action covered in the report through passage of a concurrent resolution by both Houses of Congress before the end of the 60-day period.



Annex D-1

EXTRACTS OF THE U.S. CODE

The sources of the following extracts of the United States code are Federal Code Annotated, The Bobbs-Merrill Company, Inc., Indianapolis - New York, 1965, and "United States Code Service, FCA Edition," Pocket Supplement, issued April 1976 with the exception of 10 USC 673b which is from "United States Code Services, FCA Edition," Pocket Supplement, issued May 1977. The former is identified on the excerpts as "USC" and the latter two as "SUPP." The extracts are in numerical order.

263. Basic policy for order into Federal service.—Whenever Congress determines that more units and organizations are needed for the national security than are in the regular components of the ground and air forces, the Army National Guard of the United States and the Air National Guard of the United States, or such parts of them as are needed, together with units of other reserve components necessary for a balanced force, shall be ordered to active duty and retained as long as so needed. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 11.)

Prior law.—This section is based on Act July 9, 1952, c. 608, § 201(b) (less 1st sentence), 66 Stat. 482 (former § 921(b) of Title 50).

Cross reference.—Similar provision, see § 102 of Title 32.

Source: USC, p 12.

263. Basic policy for order into Federal service.

Authority to call Ready Reserve to duty.—Act Oct. 15, 1966, P. L. 89-687, Title I, § 101(a), 80 Stat. 981, as amended Act Sept. 20, 1968, P. L. 90-500, Title III, § 303, 82 Stat. 850, provided:

(a) Notwithstanding any other provision of law, until June 30, 1968, the President may order to active duty any member of the Ready Reserve of an armed force who—

(1) is not assigned to, or participating satisfactorily in, a unit in the Selected Reserve, and

(2) has not fulfilled his statutory reserve obligation, and

(3) has not served on active duty or active duty for training for a total of twenty-four months.

(b) Notwithstanding the provisions of any other law, until June 30, 1968, the President may order to active duty any member of the Ready Reserve of an armed force who had become a member of a reserve component prior to July 1, 1966; and who

(1) has not served on active duty or active duty for training for a period of one hundred and twenty days or more, and

(2) has not fulfilled his statutory reserve military obligation.

(c) A member ordered to active duty under this section may be required to serve on active duty until his total service on active duty or active duty for training equals twenty-four months. If the enlistment or period of military service of a member of the Ready Reserve ordered to active duty under subsection (a) or (b) of this section would expire before he has served the required period of active duty prescribed herein, his enlistment or period of military service may be extended until that service on active duty has been completed.

(d) In order to achieve fair treatment as between members in the Ready Reserve who are being considered for active duty under this section, appropriate consideration shall be given to—

(1) family responsibilities; and

(2) employment necessary to maintain the national health, safety, or interest.

(e) Notwithstanding any other provision of law, until June 30, 1969, the President may, when he deems it necessary, order to active duty any unit of the Ready Reserve of an armed force for a period of not to exceed twenty-four months.

Source: SUPP, pp 8-9.

265. Policies and regulations—Participation of reserve officers in preparation and administration.—Within such numbers and in such grades and assignments as the Secretary concerned may prescribe, each armed force shall have officers of its reserve components on active duty (other than for training) at the seat of government, and at headquarters responsible for reserve affairs, to participate in preparing and administering the policies and regulations affecting those reserve components. While so serving, such an officer is an additional number of any staff with which he is serving. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 11.)

Prior law.—This section is based on Act July 9, 1952, c. 608, § 252, 66 Stat. 496 (former § 1003 of Title 50).

Source: USC, p 13.

**270. Ready Reserve—Training requirements.**—(a) Except as specifically provided in regulations to be prescribed by the Secretary of Defense, or by the Secretary of the Treasury with respect to the Coast Guard when it is not operating as a service in the Navy, each person who is inducted, enlisted, or appointed in an armed force after August 9, 1955, and who becomes a member of the Ready Reserve under any provision of law except section 269(b) of this title, shall be required, while in the Ready Reserve, to—

(1) participate in at least 48 scheduled drills or training periods during each year and serve on active duty for training not more than 17 days during each year; or

(2) serve on active duty for training not more than 30 days during each year.

(b) A member of the Ready Reserve covered by this section who fails in any year to satisfactorily perform the training duty prescribed in subsection (a), as determined by the Secretary concerned under regulations to be prescribed by the Secretary of Defense, may be ordered without his consent to perform additional active duty for training for not more than 45 days. If the failure occurs during the last year of his required membership in the Ready Reserve, his membership is extended until he performs that additional active duty for training, but not for more than six months.

(c) Any person who becomes a member of the Army National Guard of the United States or the Air National Guard of the United States after the enactment of this subsection [Oct. 4, 1961] and who fails in any year to perform satisfactorily the training duty prescribed by or under law for members of the Army National Guard or the Air National Guard, as the case may be, as determined by the Secretary concerned, may, upon the request of the Governor of the State or territory, Puerto Rico, or the Canal Zone, or the commanding general of the District of Columbia National Guard, whichever is concerned, be ordered, without his consent, to perform additional active duty for training for not more than forty-five days. A member ordered to active duty under this subsection shall be ordered to duty as a Reserve of the Army or as a Reserve of the Air Force, as the case may be. (Sept. 2, 1958, P. L. 85-861, § 1(5)(A), 72 Stat. 1438; Oct. 4, 1961, P. L. 87-378, § 2, 75 Stat. 807; Sept. 3, 1963, P. L. 88-110, § 4, 77 Stat. 136.)

**Prior law.**—This section is based on Act Aug. 9, 1955, c. 665, § 2(b), 69 Stat. 598 (former § 928(f) of Title 50).

**Amendment notes.**—Act Oct. 4, 1961, cited to text, added subsec. (c).

Act Sept. 3, 1963, cited to text, deleted “other than one enlisted under section 456(c) (2)(C) of title 50, appendix,” in subsec. (b).

#### NOTES TO DECISIONS

Member of ready reserve of United States marine corps, ordered to additional active service because of unsatisfactory performance of his work, was subject to Uniform Code of Military Justice [§ 801 et seq. of this title]. *Petition of La Plata*, (DC-Mich), 174 FSupp 884.

#### 270. Ready Reserve—Training requirements.

—(a) \* \* \*

(1) participate in at least 48 scheduled drills or training periods during each year and serve on active duty for training of not less than 14 days (exclusive of traveltime) during each year;

(2) \* \* \*

However, no member who has served on active duty for one year or longer shall be required to perform a period of active duty for training if the first day of such period falls during the last one hundred and twenty days of his required membership in the Ready Reserve.

(b) \* \* \* (As amended Dec. 1, 1967, P. L. 90-168, § 2(10), 81 Stat. 523; Nov. 17, 1971, P. L. 92-156, Title III, § 303, 85 Stat. 425.)

Source: SUPP, p 10.

**331. Federal aid for State governments.**—Whenever there is an insurrection in any State against its government, the President may, upon the request of its legislature or of its governor if the legislature cannot be convened, call into Federal service such of the militia of the other States, in the number requested by that State, and use such of the armed forces, as he considers necessary to suppress the insurrection. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 15.)

Prior law.—This section is based on R. S. § 5297 (former § 201 of Title 50).

Cross references.—Call of national guard in event of rebellion, see §§ 3500, 8500 of this title.

Use of army and air force as posse comitatus, see § 1385 of Title 18.

#### DECISIONS UNDER PRIOR LAW

The power of deciding whether the exigency had arisen upon which the government of the United States was bound to interfere, was given to the President. *Martin v. Mott*, 25 US(12 Wheat) 19, 6 LRA 537; *Luther v. Borden*, 48 US(7 How) 1, 12 LEd 581.

The President had a right to institute a blockade of ports in possession of persons in armed rebellion against the government. *In re Prize Cases*, 67 US(2 Black) 635, 17 LEd 459.

Courts could not review President's proclamation that a state of insurrection or hostility existed; and the courts would hold this condition existed until the President decided to the contrary. *Phillips v. Hatch*, (CC-Iowa), Fed Cas 11,094, 1 Dill 571; *U. S. v. 129 Packages*, (DC-Mo), FedCas 15,941; *McClelland v. U. S.*, 10 CtCls 68.

President was authorized to call out military forces to aid civil authorities of District of Columbia. *U. S. v. Stewart*, (CC-DC), FedCas 16,401a, 2 Hayw&H 280.

An eligible individual, whether registered or not, could have been subjected to military law by the sending of an order for him to report. *Stone v. Christensen*, (DC-Ore), 36 FSupp 739.

When called into the field for the purpose of causing the laws to be duly executed, the operations of the military force had to be purely defensive, and in strict subordination to the civil authority. 9 OAG 517.

In times of insurrection the President was authorized to suspend the privilege of the writ of habeas corpus. 10 OAG 74.

Source: USC

#### 331. Federal aid for State governments.

##### NOTES TO DECISIONS

Complaint alleging "chilling" of First Amendment rights by the existence of an overbroad military investigative and data-gathering activity, called into play under 10 USCS § 331 in preparation for possible civil disorders and not directly focusing on any actions of petitioner, fails to present a justiciable controversy. *Laird v. Tatum* (1972) 408 US 1, 33 L Ed 2d 154, 92 S Ct 2318, reh den 409 US 901, 34 L Ed 2d 165, 93 S Ct 94.

Source: SUPP

**332. Use of militia and armed forces to enforce Federal authority.**—Whenever the President considers that unlawful obstructions, combinations, or assemblages, or rebellion against the authority of the United States, make it impracticable to enforce the laws of the United States in any State or Territory by the ordinary course of judicial proceedings, he may call into Federal service such of the militia of any State, and use such of the armed forces, as he considers necessary to enforce those laws or to suppress the rebellion. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 15.)

Prior law.—This section is based on R. S. § 5298 (former § 202 of Title 50).

#### NOTES TO DECISIONS

The President has the power, under the Constitution [Const. art. 2, § 1, cl. 1] and laws of the United States, particularly this section and § 333 of this title, to call the national guard into the federal service and use those forces, together with such of the armed forces as he deems necessary, to suppress domestic violence, obstruction and resistance to federal law and federal court orders; and such power is not impaired by the "Posse Comitatus Act" [18 § 1385]. 41 OAG 313.

#### DECISIONS UNDER PRIOR LAW

Use of military forces for the protection of life and property in Alaska, see 19 OAG 368.

Power to determine whether exigency existed for interfering was given to the President of the United States. *Luther v. Borden*, 48 US(7 How) 1, 12 LEd 581.

Payment of money in his hands to the insurrectionary government, under a decree of a confederate court, could not have been pleaded in bar by an executor in a suit by the legatees. *Stevens v. Griffith*, 111 US 48, 28 LEd 348, 4 SCR 283.

To constitute an insurrection it was necessary that the rising was in opposition to the laws of the United States, and so formidable as for the time being to defy the authority of the United States. *In re Charge to Grand Jury*, (DC-III), 62 Fed 828.

Where an organized, armed, and fortified resistance to the execution of law existed, the United States marshal could not be aided by the military forces as a posse comitatus, but the President had authority to call out the military forces. 16 OAG 162.

Military forces were unavailable to suppress unlawful organizations, unless the facts were such that they might have been used under statutory authority granted. 17 OAG 242.

Military forces of the United States could have been used to suppress outlaws in the territory of Arizona. 17 OAG 333.

It was competent for the President to direct the military forces to render such aid to the United States marshal as might have been necessary to enable him to enforce the laws in the Indian Territory. 19 OAG 293.

The President could not use the naval forces in the enforcement of the National Prohibition Act [Uncodified Material, p. 404], in absence of emergency. 33 OAG 562.

Source: USC

**511. Reserve components — Terms.—**

(a) Except as otherwise prescribed by law, enlistments as Reserves are for terms prescribed by the Secretary concerned. However, an enlistment that is in effect at the beginning of a war or of a national emergency declared by Congress, or entered into during such a war or emergency, and that would otherwise expire, continues in effect until the expiration of six months after the end of that war or emergency, whichever is later, unless sooner terminated by the Secretary concerned.

(b) Under regulations to be prescribed by the Secretary concerned, a person who is qualified for enlistment for active duty in an armed force, and who is not under orders to report for induction into an armed force under sections 451-473 of title 50, appendix, may be enlisted as a Reserve for service in the Army Reserve, Naval Reserve, Air Force Reserve, Marine Corps Reserve, or Coast Guard Reserve, for a term of six years. Each person enlisted under this subsection shall serve—

(1) on active duty for a period of two years;

(2) satisfactorily as a member of the Ready Reserve for a period that, when added to his active duty under clause (1), totals five years; and

(3) the rest of his period of enlistment as a member of the Standby Reserve.

(c) In time of war or of national emergency declared by Congress the term of service of an enlisted member transferred to a reserve component according to law, that would otherwise expire, continues until the expiration of six months after the end of that war or emergency, whichever is later, unless sooner terminated by the Secretary concerned.

(d) Under regulations to be prescribed by the Secretary of Defense, or the Secretary of the Treasury with respect to the Coast Guard when it is not operating as a service in the Navy, a non-prior-service person who is under twenty-six years of age, who is qualified for induction for active duty in an armed force, and who is not under orders to report for induction into an armed force under section 451-473 of title 50, appendix, may be enlisted in the Army National Guard or the Air National Guard, or as a Reserve for service in the Army Reserve, Naval Reserve, Air Force Reserve, Marine Corps Reserve, or Coast Guard Reserve, for a term of six years. Each person enlisted under this subsection shall perform an initial period of active duty for training of not less

than four months and shall subject to section 269(e)(4) of this title, serve the rest of his period of enlistment as a member of the Ready Reserve. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 18; Sept. 2, 1958, P. L. 85-861, § 1(8), 72 Stat. 1439; Sept. 3, 1963, P. L. 88-110, § 3, 77 Stat. 135.)

**Prior law.**—This section is based on Act July 9, 1952, c. 608, § 227, 66 Stat. 488 (former § 951 of Title 50).

**Explanatory note.**—The word "section" in subsec. (d) of this section so appeared in the act. The word "sections" was the word probably intended.

**Amendment notes.**—Act Sept. 2, 1958, cited to text, redesignated subsec. (b) to be (c) and added subsec. (b).

Act Sept. 3, 1963, cited to text, added subsec. (d).

**Cross reference.**—Army or air force, war or emergency, see §§ 3254 and 8254 of this title.

Source: USC

**511. Reserve components—Terms.—(a) \* \* \***

(d) Under regulations to be prescribed by the Secretary of Defense, or the Secretary of Transportation with respect to the Coast Guard when it is not operating as a service in the Navy, a non-prior-service person who is under 26 years of age, who is qualified for induction for active duty in an armed force, and who is not under orders to report for induction into an armed force under the Military Selective Service Act of 1967 (50 App. U.S.C. 451-473) [50 USCS Appx. § 451 et seq.], except as provided in section 6(c)(2)(A) (ii) and (iii) of such Act [50 USCS Appx. § 456 (c)(2)(A)(ii), (iii)], may be enlisted in the Army National Guard or the Air National Guard, or as a Reserve for service in the Army Reserve, Naval Reserve, Air Force Reserve, Marine Corps Reserve, or Coast Guard Reserve, for a term of six years. Each person enlisted under this subsection shall perform an initial period of active duty for training of not less than twelve weeks to commence insofar as practicable within 180 days after the date of that enlistment. (As amended Dec. 1, 1967, P. L. 90-168, § 2(11), 81 Stat. 523; Oct. 7, 1975, P. L. 94-106, Title VIII, § 302(a), 89 Stat. 537.)

**NOTES TO DECISIONS**

**Defendant enlisted in the Army Reserves and there**

was a delay of twenty months before he was called on active duty for limited term training. Such a delay was within the discretion of the Armed Forces and the court will not interfere with it. The fact that enlistment contract specifically provided for entry to active duty for the limited term within 120 days had a provision in it unless a delay for a longer period is authorized or directed by the Department of the Army permits such a delay. *United States ex rel. Lewis v Laird* (1972 DC Ill) 337 F Supp 118.

Army reservists stated cause of action where they alleged that, by failing to call them to active duty training within 180 days of their date of enlistment, Army breached its respective contracts with them and failed to follow its own regulations, thus denying them due process of law. *Myers v Parkinson* (1975, DC Wis) 398 F Supp 727.

Source: SUPP

519. Temporary enlistments—During war or emergency.—Except as provided in section 505 of this title and except for enlistments as Reserves of an armed force—

(1) temporary enlistments in an armed force entered into in time of war or of emergency declared by Congress shall be for the duration of the war or emergency plus six months; and

(2) only persons at least eighteen years of age and otherwise qualified under regulations to be prescribed by the Secretary concerned are eligible for such enlistments. (Jan. 2, 1968, P. L. 90-235, § 2(a)(1)(B), 81 Stat. 755.)

Source: SUPP

671a. Members—Service extension during war.—Unless terminated at an earlier date by the Secretary concerned, the period of active service of any member of an armed force is extended for the duration of any war in which the United States may be engaged and for six months thereafter. (Jan. 2, 1968, P. L. 90-235, § 1(a)(1)(A), 81 Stat. 753.)

671b. Members—Service extension when Congress is not in session.—(a) Notwithstanding any other provision of law, when the President determines that the national interest so requires, he may, if Congress is not in session, having adjourned sine die, authorize the Secretary of Defense to extend for not more than six months enlistments, appointments, periods of active duty, periods of active duty for training, periods of obligated service, or other military status, in any component of the Armed Forces of the United States, that expire before the thirtieth day after Congress next convenes or reconvenes.

(b) An extension under this section continues until the sixtieth day after Congress next convenes or reconvenes or until the expiration of the period of extension specified by the Secretary of Defense, whichever occurs earlier, unless sooner terminated by law or Executive order;[.] (Jan. 2, 1968, P. L. 90-235, § 1(a)(1)(A), 81 Stat. 753.)

Source: SUPP

**672. Reserve components generally.—**

(a) In time of war or of national emergency declared by Congress, or when otherwise authorized by law, an authority designated by the Secretary concerned may, without the consent of the persons affected, order any unit, and any member not assigned to a unit organized to serve as a unit, of a reserve component under the jurisdiction of that Secretary to active duty (other than for training) for the duration of the war or emergency and for six months thereafter. However—

(1) a member on an inactive status list or in a retired status may not be ordered to active duty under this subsection unless the Secretary concerned, with the approval of the Secretary of Defense in the case of the Secretary of a military department, determines that there are not enough qualified Reserves in an active status or in the inactive National Guard in the required category who are readily available; and

(2) a member of the Standby Reserve may not be ordered to active duty under this subsection unless the Director of Selective Service determines that the member is available for active duty.

(b) At any time, an authority designated by the Secretary concerned may, without the consent of the persons affected, order any unit, and any member not assigned to a unit organized to serve as a unit, in an active status in a reserve component under the jurisdiction of that Secretary to active duty for not more than 15 days a year. However, units and members of the Army National Guard of the United States or the Air National Guard of the United States may not be ordered to active duty under this subsection without the consent of the governor of the State or Territory, Puerto Rico, or the Canal Zone, or the commanding general of the District of Columbia National Guard, as the case may be.

(d) At any time, an authority designated by the Secretary concerned may order a member of a reserve component under his jurisdiction to active duty, or retain him on active duty, with the consent of that member. However, a member of the Army National Guard of the United States or the Air National Guard of the United States may not be ordered to active duty under this subsection without the consent of the governor or other appropriate authority of the State or Territory, Puerto Rico, the Canal Zone, or the District of Columbia, whichever is concerned.

(e) A reasonable time shall be allowed between the date when a Reserve ordered to active duty (other than for training) is alerted for that duty and the date when he is required to enter upon that duty. Unless the Secretary concerned determines that the military requirements do not allow it, this period shall be at least 30 days. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 27; Sept. 2, 1958, P. L. 85-861, §§ 1(13), 33(a)(5), 72 Stat. 1440, 1564.)

**Prior law.**—This section is based on Act July 9, 1952, c. 608, §§ 233 (less (b) and (f)), 234 (1st sentence), 66 Stat. 489, 490 (former §§ 961 and 962 of Title 50).

**Revision note.**—In subsection (b), the words "without the consent of the persons affected" are used instead of "without his consent," since units as well as individuals are covered by the revised subsection.

**Amendment note.**—Act Sept. 2, 1958, cited to text, inserted "(other than for training)" in the first sentence, inserted "(1)" and deleted "Army" and "or in the inactive Air National Guard" in the second sentence, and added clause (2) in subsec. (a) and inserted "(other than for training)" twice in subsec. (c).

**Effective date of 1958 Amendment.**—Section 33(g) of Act Sept. 2, 1958, cited to text, provided that the amendment of subsecs. (a) and (c) of this section by inserting "(other than for training)" shall be effective from Aug. 10, 1956.

Source: USC

**672. Reserve components generally.**

**NOTES TO DECISIONS**

Even though there was no war or national emergency, army reservists could be called to active duty "when otherwise authorized by law" without breaching enlistment contract as rules of ordinary contract law did not apply automatically to those in military service. (1969) *Adams v Clifford*, (DC-Hawaii), 294 F Supp 1318.

Source: SUPP

673. Ready Reserve.—(a) In time of national emergency declared by the President after January 1, 1953, or when otherwise authorized by law, an authority designated by the Secretary concerned may, without the consent of the persons concerned, order any unit, and any member not assigned to a unit organized to serve as a unit, in the

Ready Reserve under the jurisdiction of that Secretary to active duty (other than for training) for not more than 24 consecutive months.

(b) To achieve fair treatment as between members in the Ready Reserve who are being considered for recall to duty without their consent, consideration shall be given to—

(1) the length and nature of previous service, to assure such sharing of exposure to hazards as the national security and military requirements will reasonably allow;

(2) family responsibilities; and

(3) employment necessary to maintain the national health, safety, or interest.

The Secretary of Defense shall prescribe such policies and procedures as he considers necessary to carry out this subsection. He shall report on those policies and procedures at least once a year to the Committees on Armed Services of the Senate and the House of Representatives.

(c) Not more than 1,000,000 members of the Ready Reserve may be on active duty (other than for training), without their consent, under this section at any one time. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 28; Sept. 2, 1958, P. L. 85-861, §§ 1 (14), 33(a) (5), 72 Stat. 1441, 1564.)

Prior law.—This section is based on Act July 9, 1952, c. 608, § 233(b), 66 Stat. 489 (former § 961 of Title 50).

Amendment note.—Act Sept. 2, 1958, cited to text, inserted "(other than for training)" in the first sentence and deleted a second sentence which read: "This subsection does not apply unless Congress determines how many members of the reserve components are necessary, in the interest of national security, to be ordered to active duty hereunder." in subsec. (a) and added subsec. (c).

Effective date of 1958 Amendment.—Section 33(g) of Act Sept. 2, 1958, cited to text, provided that the insertion of the words "(other than for training)" in subsec. (a) of this section should be effective as of August 10, 1956, for all purposes.

Cross reference.—Strength of ready reserve, see § 268 of this title.

Source: USC



## Title 10, U.S. Code

### 673. Ready reserve.—(a) \* \* \*

(d) Whenever one or more units of the Ready Reserve are ordered to active duty, the President shall, on the first day of the second fiscal year quarter immediately following the quarter in which the first unit or units are ordered to active duty and on the first day of each succeeding six-month period thereafter, so long as such unit is retained on active duty, submit a report to the Congress regarding the necessity for such unit or units being ordered to and retained on active duty. The President shall include in each such report a statement of the mission of each such unit ordered to active duty, an evaluation of such unit's performance of that mission, where each such unit is being deployed at the time of the report, and such other information regarding each unit as the President deems appropriate. (As amended Nov. 16, 1973, P. L. 93-155, Title III, § 303(a), 87 Stat. 607.)

Effective date.—Act Nov. 16, 1973, P. L. 93-155, Title III, § 303(b), 87 Stat. 607, provided that subsec. (d) of this section "shall be effective with respect to any unit of the Ready Reserve ordered to active duty on or after the date of enactment of this Act [Nov. 16, 1973]."

#### NOTES TO DECISIONS

The determination of "neat and soldierly appearance" is a determination within the discretion of the military and failure to give reservist credit for drills was proper exercise of discretion when it was shown that he did not comply with appearance standard of army regulation. (1969) *Rademon v Kaine*, (CA2), 411 F2d 1102.

A marine corps reservist who was called to active duty for not participating 100% in reserve drills and who was discharged and subsequently reactivated was not subjected to double jeopardy due to an administrative error in the discharge action. (1969) *Winters v U. S.*, (CA9), 412 F2d 140.

The government was not estopped from ordering petitioner to active duty because his unit had been deactivated when it published a memorandum stating that such persons in deactivated units would be called to active duty even though petitioner had no knowledge whatsoever of such an action by the government

and even though he received a letter stating that he would never be called to active duty. (1969) *Dix v Rollins*, (CA8), 413 F2d 711.

Selective service regulations devised to implement 10 USCS § 673(a) which governs the involuntary activation of a military reservist who has more than five unexcused absences from "unit training assemblies" are not invalid on due process grounds where the procedure permits the reservist to take the matter up with his unit commander and also permits an appeal in which the reservist has an opportunity to explain the facts pertinent to his case which he feels have not been fully considered and to include any additional appropriate evidence. *O'Mara v Zebrowski* (1971, CA3 Pa) 447 F2d 1085.

10 USCS § 673(a), the statutory basis for a military reservist's involuntary activation, was not qualified or modified by 10 USCS § 886(1) (which concerns absence without leave) nor 10 USCS § 815 (which concerns a commanding officer's non-judicial punishment) since these statutes were enacted prior to 10 USCS § 673(a) which begins with the unequivocal language "Notwithstanding any other provision of law". *O'Mara v Zebrowski* (1971, CA3 Pa) 447 F2d 1085.

Petitioner, who was a member of a national guard unit, was not entitled to relief via a habeas corpus petition on the grounds that he was a civilian and should be released from the military, when the military had jurisdiction over him because he had missed more than the required number of drills and was subsequently called to active duty. (1969) *In Matter of Colon-Rios v Perrin*, (DC-Puerto Rico), 306 F Supp 1314.

As applied to Army Reservists, regulation which prohibits wearing of wig or hairpiece while in uniform or on duty, except for cosmetic reasons to cover natural baldness and when appropriate to cover physical disfiguration caused by accident or medical procedure, exceeds statutory authorization; prohibiting plaintiff from wearing short-haired wig over his long hair at reserve meetings impinges upon his freedom to govern his appearance which is protected by due process clauses of the fifth and the fourteenth amendments. *Harris v Kaine* (1972, DC NY) 352 F Supp 769.

Members of the national guard who did not serve with their units during the postal strike of March, 1970 but were already performing their required active duty for training at various army posts in the United States are not entitled to a transfer to the Standby Reserve because they did not actually participate in the call up. *Mela v Callaway* (1974, DC NY) 378 F Supp 25.

Army Reservist ordered to active duty under 10 USCS § 673(a) due to his failure to satisfactorily participate in scheduled Army Reserve drills could not complain of absence of notice where evidence showed he systematically and intentionally failed to claim correspondence directed to him by his Reserve unit. *United States ex rel. Niemann v Greer* (1975, DC NJ) 394 F Supp 249.

Source: SUPP

**673a. Ready Reserve—Members not assigned to, or participating satisfactorily in, units.—(a)** Notwithstanding any other provision of law, the President may order to active duty any member of the Ready Reserve of an armed force who—

- (1) is not assigned to, or participating satisfactorily in, a unit of the Ready Reserve;
- (2) has not fulfilled his statutory reserve obligation; and
- (3) has not served on active duty for a total of 24 months.

(b) A member who is ordered to active duty under this section may be required to serve on active duty until his total service on active duty equals 24 months. If his enlistment or other period of military service would expire before he has served the required period under this section, it may be extended until he has served the required period.

(c) To achieve fair treatment among members of the Ready Reserve who are being considered for active duty under this section, appropriate consideration shall be given to—

- (1) family responsibilities; and
- (2) employment necessary to maintain the national health, safety, or interest. (June 30, 1967, P. L. 90-40, § 6(1), 81 Stat. 105.)

#### NOTES TO DECISIONS

Activation under this section of a member of the reserves was not unconstitutional as a violation of his prior enlistment contract with the reserves which provided for an order to active duty for training for 45 days or report to selective service for immediate induction. (1969) *Schwartz v Franklin*, (CA9), 412 F2d 736.

Retroactive application of this section to order appellant, who enlisted in National Guard prior to enactment of this section, did not harm appellant in any tangible way, where, although appellant's enlistment contract provided that any induction was to be through the Selective Service System, the applicable regulations at the time of appellant's enlistment made clear that the local board's responsibility was solely ministerial, to bring into active service a soldier who had already enlisted and whose reserve status had been terminated; appellant would have had no right to reclassification if he were processed through Selective Service, so he lost no right by being activated through a procedure which bypassed the local draft board. (1970) *Gianatasio v Whyte*, (CA2), 426 F2d 908.

The fact that there has been a hiatus in training, due to unsatisfactory performance on the part of the trainee, training being resumed within one month, did not prevent the trainee from being lawfully a member of the Air National Guard and subject, under this section, to be called up for active duty for not participating satisfactorily in his unit. (1970) *Rasmussen v Seamans*, (CA10), 432 F2d 346.

The national guard has no responsibility to process the application for discharge of a delinquent reservist who first files his application after he has already been issued orders to report for active duty. (1970) *Johnson v Laird*, (9th Cir CA), 435 F2d 493.

The definition of "satisfactory participation" is a matter properly within the area of military discretion, which prevents civil courts to judge whether the military has properly determined the balance between military needs and personal rights, therefore, it is proper to deny credit for attendance to a member whose hair style did not conform to the commander's standard. *Anderson v Laird* (1971, CA7 Ill) 437 F2d 912.

A full personal hearing is not required as a matter of contractual law or as a matter of constitutional law when appealing an involuntary activation order. *Ansted v Resor* (1971, CA7 Ind) 437 F2d 1020.

Due process does not require a full formal hearing before an administrative activation of an Army reservist, and reservists may be activated pursuant to this section, notwithstanding clauses in their enlistment contracts to the contrary. *Antonuk v United States* (1971, CA6 Mich) 445 F2d 592.

Appropriate consideration was not given to hardship claim of Marine Corps reservist, ordered to involuntary active duty under authority of 10 USCS § 673a as implemented by Marine Corps order requiring commanding officers to investigate personal hardship claims, where record showed that reservist was not specifically questioned concerning hardship claim, or advised of right to make hardship claim, by interviewing officers, but that commandant could have assumed that he had been so questioned, and Marine Corps would be directed to give appropriate consideration to whatever hardship claim reservist could make. *United States ex rel. Sledjeski v Commanding Officer, Armed Forces* (1973, CA2 Conn) 478 F2d 1147.

A reservist's administrative activation under this section was affirmed where the Army followed its appropriate regulations in processing his appeal, even though that regulation only indicates what authority would consider his appeal and does not detail what must and may be submitted with the appeal or enumerate the reasons for which an appeal may be taken. *Antonuk v United States* (1971, CA6 Mich) 445 F2d 592.

Mandamus is proper action to test validity of activation order based upon unexcused absences from training assemblies claimed to be illegal in that unit commander did not follow army regulations prior to activation for unsatisfactory participation. *Papaioannou v Commanding Officer, 1st U.S. Army* (1975, CA1 RI) 509 F2d 692.

The Congressional intent is clearly to equalize the obligation of reservists who have not previously served on active duty with that of draftees who spend 24 months on active duty. (1969) *Heuchan v Laird*, (DC-Mo), 314 F Supp 796.

Regulations governing the length of hair and beards of men in the army reserve were not unconstitutional on the ground that enforcement of such regulations would subject the reservists to additional unexcused absences, and that an accumulation of five such absences during a 12-month period would make them liable for involuntary active duty. (1970) *Krill v Bauer*, (DC-Wis), 314 F Supp 965.

Activation order issued pursuant to this section is not punitive administrative action but rather is simply an administrative or contractual sanction imposed for failure to perform duties voluntarily accepted in return for exemption from service in the regular army and, therefore, this section is not unconstitutional in failing to accord a reservist procedural due process. *Mickey v Barclay* (1971, DC Pa) 328 F Supp 1108.

Unexcused absences from scheduled drills comes within the meaning of "unsatisfactory participation" especially in view of specific advice petitioner was given concerning what would constitute unsatisfactory participation and, therefore, this section is not unconstitutional on its face in that it is void for vagueness nor is it unconstitutional as applied to petitioner. *Mickey v Barclay* (1971, DC Pa) 328 F Supp 1108.

Plaintiff's allegation that 10 USCS § 673a is unconstitutional on its face in that (a) it is void for vagueness since it lacks standards by which "unsatisfactory participation" can be ascertained; and (b) it authorizes administrative punishment without procedural due process is plainly insubstantial and does not warrant the convening of a three-judge court under 28 USC § 2282. *Mickey v Barclay* (1971, DC Pa) 328 F Supp 1108.

An involuntary order to active duty of a reservist found to be performing unsatisfactorily does not constitute cruel and unusual punishment. *Caruso v Toothaker* (1971, DC Pa) 331 F Supp 294.

A determination by an officer that a reserve member has failed to participate satisfactorily is immaterial from a complaint that the officer failed to determine "whether any cogent or emergency reasons existed which prevented the member from attending" his drill periods where facts show that the officer questioned the member as to whether there were any facts he should be aware of before deciding whether to deny credit for the periods and received no reply. *Caruso v Toothaker* (1971, DC Pa) 331 F Supp 294.

A determination by an officer that a reserve member is not performing satisfactorily will not be disturbed for failure by the officer to make findings those findings are not required by Army regulation. *Caruso v Toothaker* (1971, DC Pa) 331 F Supp 294.

It is not constitutionally required that a reservist called to active duty be supplied a copy of his Appeal Board record. *Caruso v Toothaker* (1971, DC Pa) 331 F Supp 294.

A determination that a reserve member was absent without excuse will be upheld where, although physically present at the assembly, the reservist did not fulfill regulation requirements that he appear in the prescribed uniform, that his appearance be neat and soldierly, and that he perform his assigned duties in satisfactory manner. *Caruso v Toothaker* (1971, DC Pa) 331 F Supp 294.

Reservist has no right to formal hearing when faced with involuntary call to active duty due to unsatisfactory participation in Ready Reserve under provision of 10 USCS § 673a; administrative remedies under 10 USCS § 938 must be exhausted before habeas corpus action in federal court may be brought. *Herrick Cushman* (1974, DC NC) 379 F Supp 1143.

Court-martial trying accused on charge of unauthorized absence in violation of Article 86, UCMJ (10 USCS § 886) had no jurisdiction over accused who was not properly ordered to active duty pursuant to 10 USCS § 673a on grounds of excessive unexcused absences from training meetings of National Guard unit because there was no proof that provisions of Army Regulation 135-91, prescribing procedures for determining delinquencies and issuing call-up orders were followed and second court-martial had no jurisdiction over accused after he was apprehended for failure to report for duty following his plea of guilty to charges of absence without leave at first court martial which was still on appeal. *United States v Kilbreth* (1973) 22 USCMA 390, 47 CMR 327.

Source: SUPP

673b. Selected Reserve; order to active duty other than during war or national emergency.—

(a) Notwithstanding the provisions of section 673(a) [10 USCS § 673(a)] or any other provision of law, when the President determines that it is necessary to augment the active forces for any operational mission, he may authorize the Secretary of Defense and the Secretary of Transportation with respect to the Coast Guard when it is not operating as a service in the Navy, without the consent of the members concerned, to order any unit, and any member not assigned to a unit organized to serve as a unit, of the Selected Reserve (as defined in section 268(b) of this title [10 USCS § 268(b)]), under their respective jurisdictions, to active duty (other than for training) for not more than 90 days.

(b) No unit or member of a Reserve component may be ordered to active duty under this section to perform any of the functions authorized by chapter 15 or section 3500 or 3500 of this title [10 USCS §§ 331 et seq., 3500, 3500], or to provide assistance to either the Federal Government or a State in time of a serious natural or manmade disaster, accident, or catastrophe.

(c) Not more than 50,000 members of the Selected Reserve may be on active duty under this section at any one time.

(d) Members ordered to active duty under this section shall not be counted in computing authorized strength in members on active duty or members in grade under this title [10 USCS §§ 101 et seq.] or any other law.

(e) The Secretary of Defense and the Secretary of Transportation shall prescribe such policies and procedures for the Armed Forces under their respective jurisdictions as they consider necessary to carry out this section.

(f) Whenever the President authorizes the Secretary of Defense or the Secretary of Transportation to order any unit or member of the Selected Reserve to active duty, under the authority of subsection (a), he shall, within 24 hours after exercising such authority, submit to the Speaker of the House of Representatives and to the President pro tempore of the Senate a report, in writing, setting forth the circumstances necessitating the action taken under this section and describing the anticipated use of these units or members.

(g) Whenever any unit of the Selected Reserve or any member of the Selected Reserve not assigned to a unit organized to serve as a unit is ordered to active duty under authority of subsection (a), the service of all units or members so ordered to active duty may be terminated by—

- (1) order of the President, or
- (2) a concurrent resolution of the Congress.

(h) Nothing contained in this section shall be construed as amending or limiting the application of the provisions of the War Powers Resolution [50 USCS §§ 1541 et seq.]. (Added May 14, 1976, P. L. 94-236, § 1 in part, 90 Stat. 517.)

Source: SUPP

674. Standby Reserve.—(a) Units and members in the Standby Reserve may be ordered to active duty (other than for training) only as provided in section 672 of this title.

(b) In time of emergency—

(1) no unit in the Standby Reserve organized to serve as a unit or any member thereof may be ordered to active duty (other than for training), unless the Secretary concerned, with the approval of the Secretary of Defense in the case of a Secretary of a military department, determines that there are not enough of the required kinds of units in the Ready Reserve that are readily available; and

(2) no other member in the Standby Reserve may be ordered to active duty (other than for training) as an individual without his consent, unless the Secretary concerned, with the approval of the Secretary of Defense in the case of a Secretary of a military department, determines that there are not enough qualified members in the Ready Reserve in the required category who are readily available. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 29; Sept. 7, 1962, P. L. 87-651, Title I, § 130, 76 Stat. 514.)

Prior law.—This section is based on Act July 9, 1952, c. 608, § 206 (less 1st 28 words of (a)), 66 Stat. 483 (former § 926 of Title 50).

Revision note.—The words "(other than for training)" are inserted, since the words "active duty" were defined in the source statute cited above to exclude "active duty for training."

Amendment note.—Act Sept. 7, 1962, cited to text, substituted "as provided in section 672 of this title" for "in time of war, of national emergency declared by Congress, or when otherwise authorized by law" in subsec. (a).

Source: USC

675. Retired Reserve.—A member in the Retired Reserve may, if qualified, be ordered to active duty without his consent, but only as provided in section 672(a) of this title. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 29.)

Prior law.—This section is based on Act July 9, 1952, c. 608, § 207(c), 66 Stat. 483 (former § 927 of Title 50).

Cross reference.—Composition of ready reserve, see § 274 of this title.

Title 10, U.S. Code

677. Reserve officers—Use of in expansion of armed forces.—When an expansion of the active armed forces requires that officers of the reserve components who are not members of units organized to serve as such be ordered as individuals to active duty (other than for training) without their consent, the services of qualified and available reserve officers in all grades shall be used, so far as practicable, according to the needs of the branches, grades, or special-

ties concerned. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 29.)

Prior law.—This section is based on Act July 9, 1952, c. 608, § 233(f), 66 Stat. 490 (former § 961 of Title 50).

Source: USC

678. Reserves—For organizing, administering, recruiting, or training reserve components.—(a) A Reserve ordered to active duty under section 672(d) of this title in connection with organizing, administering, recruiting, instructing, or training the reserve components shall be ordered in his reserve grade. While so serving, he continues to be eligible for promotion as a Reserve, if he is otherwise qualified.

(b) To assure that a Reserve on duty under subsection (a) receives periodic refresher training in the categories for which he is qualified, the Secretary concerned may detail him to duty with any armed force, or otherwise as the Secretary sees fit. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 30.)

Prior law.—This section is based on Act July 9, 1952, c. 608, § 234 (less 1st sentence), 66 Stat. 490 (former § 962 of Title 50).

2105. Advanced training — Failure to complete or to accept commission. — A member of the program who is selected for advanced training under section 2104 of this title, and who does not complete the course of instruction, or who completes the course but declines to accept a commission when offered, may be ordered to active duty by the Secretary of the military department concerned to serve in his enlisted grade or rating for such period of time as the Secretary prescribes but not for more than two years. (Oct. 13, 1964, P. L. 88-647, Title II, § 201 (1), 78 Stat. 1066.)

**3500. Army National Guard in Federal service—Call.—Whenever—**

(1) the United States, or any of the Territories, Commonwealths, or possessions, is invaded or is in danger of invasion by a foreign nation;

(2) there is a rebellion or danger of a rebellion against the authority of the Government of the United States; or

(3) the President is unable with the regular forces to execute the laws of the United States;

the President may call into Federal service members and units of the Army National Guard of any State or Territory, Puerto Rico, the Canal Zone, or the District of Columbia in such numbers as he considers necessary to repel the invasion, suppress the rebellion, or execute those laws. Orders for these purposes shall be issued through the governors of the States, the Territories, Puerto Rico, and the Canal Zone, and, in the District of Columbia, through the commanding general of the National Guard of the District of Columbia. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 199.)

**Prior law.**—This section is based on Act Jan. 21, 1903, c. 196, § 4; restated May 27, 1908, c. 204, § 3, 35 Stat. 400 (§ 81a of former Title 32).

**Revision note.**—The words "or any of the Territories, Commonwealths, or possessions" are inserted to conform to an opinion of the Judge Advocate General of the Army (C. 16273, May 3, 1904).

**DECISIONS UNDER PRIOR LAW**

Although a militiaman, who refused to obey the orders of the President calling him to public service, was not in the service of the United States, yet he was liable to be tried by a court-martial under authority of the United States. *Houston v. Moore*, 18 US(5 Wheat) 1, 5 LEd 19; *Martin v. Mott*, 25 US(12 Wheat) 19, 6 LEd 537.

A court-martial organized under authority of a state had no power to assess fines on delinquent members of the state militia for failure to enter the service when called by the secretary of war. *Meade v. Deputy Marshal*, (CC-Va), Fed Cas 9,372, 1 Brock 324, 2 CarLawRepos 329.

Under §§ 2 and 3 of art. 2 of the Constitution, the President had authority to call the militia of District of Columbia to aid the civil authorities. Section 8 of art. 1 of the Constitution was not applicable. *U. S. v. Stewart*, (Distof Col), FedCas 16,401a, 2 Hayw&H 280.

The Act of Jan. 21, 1903 was not repealed by the National Defense Act, June 3, 1916, and members of a state militia, although not coming within the requirements specified in that act for the national guard, were subject to service for the United States upon call of the President. *Sweetser v. Emerson*, (CCA 1), 236 Fed 161, AnnCas 1917B, 244; *Sweetser v. Lowell*, (CCA 1), 236 Fed 169.

In a prosecution for conspiracy to hinder and prevent the execution of the Act of Jan. 21, 1903, it was only necessary to show a conspiracy to use force for that purpose, and not necessary to show that force was actually used. *Wells v. U. S.*, (CCA 9), 257 Fed 605.

Under Const. art. 1, § 8, Congress could provide for calling forth the militia to execute the laws of the Union, suppress insurrections, and repel invasions. The authority to call forth the militia had been vested in the President, who was the sole judge of the exigency justifying the call. *Alabama Great Southern R. Co. v. U. S.*, 49 CtCl 522.

The President had no authority to call forth the organized militia of the states and send it into a foreign country with the regular army as a part of an army of occupation. 29 OAG 322.

Where a person was illegally elected a colonel of the state militia, he was made a colonel by being mustered into the United States service as colonel based on such illegal election. *State ex rel. Watson v. Cobb*, 2 Kan 32.

President had authority to call into service the militia in any part of the Union, and persons subject to militia duty in such district were subject to the military law. *Johnson v. Duncan*, 3 Mart(La) 530, 6 AmDec 675.

Congress had no power to place the militia under command of an officer, not a member of the militia, when the militia was performing services for the United States. In re Opinion of the Justices, 8 Mass 548.

Power to determine whether the necessary exigencies existed for calling forth the militia by the President rested with the states. In re Opinion of the Justices, 8 Mass 548.

The President was the sole judge as to the necessity of calling forth the militia. *Vanderheyden v. Young*, 11 Johns(NY) 150.

Expense of Virginia militia called into service of the United States should have been paid by United States; and if Virginia advanced funds for payment of such expenses, the State should have been reimbursed. *Commonwealth v. Pierce's Adm'r*, 4 Rand(Va) 432.

The President, who had power to call forth the militia, had power to prescribe the manner in which the members should have been drafted and detached, where the states did not make sufficient provisions for that purpose. In re Griner, 16 Wis 423; In re Wehlitz, 16 Wis 443, 84 AmDec 700.

3495. Army National Guard of the United States—Status.—Members of the Army National Guard of the United States are not in active Federal service except when ordered thereto under law. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 198.)

Prior law.—This section is based on Act July 9, 1952, c. 608, § 709 (1st sentence), 66 Stat. 503 (former § 1119 of Title 50).

Cross references.—Call into federal service, see § 3500 of this title.

Status when not in federal service, see § 3079 of this title.

Source: USC

3496. Army National Guard of United States—Commissioned officers—Duty in National Guard Bureau.—(a) The President may, with their consent, order commissioned officers of the Army National Guard of the United States to active duty in the National Guard Bureau.

(b) The number of officers of the Army National Guard of the United States in any grade below brigadier general who are ordered to active duty in the National Guard Bureau may not be more than 40 percent of the number of officers of the Army in that grade authorized for duty in that Bureau. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 198.)

Prior law.—This section is based on Act June 3, 1916, c. 134, § 81 (2d par., less 1st sentence); restated June 4, 1920, c. 227, subc. I, § 44 (less 1st 5 sentences); restated Sept. 22, 1922, c. 423, § 4 (less 1st 6 sentences); restated Feb. 28, 1925, c. 371, § 3 (7th and 8th sentences); restated June 15, 1933, c. 87, § 16 (2d par., less 1st sentence), 48 Stat. 160; Mar. 16, 1950, c. 60, 64 Stat. 19; July 9, 1952, c. 608, § 806(g) (1st 24 words of last 107 words), 66 Stat. 508 (§ 175 of former Title 32).

6485. Members of the Fleet Reserve and Fleet Marine Corps Reserve—Authority to recall.—(a) A member of the Fleet Reserve or the Fleet Marine Corps Reserve may be ordered by competent authority to active duty without his consent—

(1) in time of war or national emergency declared by Congress, for the duration of the war or national emergency and for six months thereafter;

(2) in time of national emergency declared by the President; or

(3) when otherwise authorized by law.

(b) In time of peace any member of the Fleet Reserve or the Fleet Marine Corps Reserve may be required to perform not more than two months' active duty for training in each four-year period and shall be physically examined at least once during each four-year period. If any member fails to report for

the physical examination, the Secretary may order any pay due that member forfeited. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 417.)

Prior law.—This section is based on Act June 25, 1938, c. 690, §§ 205 (1st 87 words of 2d proviso), 206 (less 2d through 5th provisos), 52 Stat. 1179; Apr. 25, 1940, c. 153, 54 Stat. 162; July 9, 1952, c. 608, §§ 803 (3d sentence), 808, 66 Stat. 505, 508 (§§ 854 note, 854d, and 854e of former Title 34).

Revision note.—In subsec. (a) the words "A member of the Fleet Reserve or the Fleet Marine Corps Reserve" are substituted for the words "That men so transferred to the Fleet Reserve . . . or other provision of law" for clarity. It is clear from the legislative history of the Armed Forces Reserve Act of 1952 that the amendment made by that Act was intended to cover all members of the Fleet Reserve and Fleet Marine Corps Reserve.

8500. Air National Guard in Federal service—Call—Whenever—

(1) the United States, or any of the Territories, Commonwealths, or possessions, is invaded or is in danger of invasion by a foreign nation;

(2) there is a rebellion or danger of a rebellion against the authority of the Government of the United States; or

(3) the President is unable with the regular forces to execute the laws of the United States;

the President may call into Federal service members and units of the Air National Guard of any State or Territory, Puerto Rico, the Canal Zone, or the District of Columbia in such numbers as he considers necessary to repel the invasion, suppress the rebellion, or execute those laws. Orders for these purposes shall be issued through the governors of the States, the Territories, Puerto Rico, and the Canal Zone, and, in the District of Columbia, through the commanding general of the National Guard of the District of Columbia. (Aug. 10, 1956, c. 1041, § 1, 70A Stat. 525.)

Prior law.—This section is based on Act Jan. 21, 1903, c. 196, § 4, 32 Stat. 776; May 27, 1908, c. 204, § 3, 35 Stat. 400 (§ 81a of former Title 32).

Revision note.—The words "or its Territories, Commonwealths, or possessions" are inserted to conform to an opinion of the Judge Advocate General of the Army (C. 16273, May 3, 1904).

Cross reference.—Decisions under prior law, see § 3500 of this title.



Title 34, U.S. Code

102. General policy. — In accordance with the traditional military policy of the United States, it is essential that the strength and organization of the Army National Guard and the Air National Guard as an integral part of the first line defenses of the United States be maintained and assured at all times. Whenever Congress determines that more units and organizations are needed for the national security than are in the regular components of the ground and air forces, the Army National Guard of the United States and the Air National Guard of the United States, or such parts of them as are needed, together with such units of other reserve components as are necessary for a balanced force, shall be ordered to active Federal duty and retained as long as so needed. (Aug. 10, 1956, c. 1041, § 2, 70A Stat. 597.)

Prior law.—This section is based on Act July 9, 1952, c. 608, § 201(b), 66 Stat. 482 (former § 921(b) of Title 50).

Source: USC

by the President. (Nov. 19, 1969, P. L. 91-121, Title IV, § 409(e), 83 Stat. 210.)

**1516. Delivery system.**—None of the funds authorized to be appropriated by this Act [5 USCS § 5315; 10 USCS §§ 133 note, 136, 261 note, 264, 2358 note, 3201; 50 USCS §§ 1436, 1511-1516] may be used for the procurement of any delivery system specifically designed to disseminate any lethal chemical or any biological warfare agent, or for the procurement of any part or component of any such delivery system, unless the President shall certify to the Congress that such procurement is essential to the safety and security of the United States. (Nov. 19, 1969, P. L. 91-121, Title IV, § 409(f), 83 Stat. 210.)

Repeated.—Provisions of this section were repeated by Act Oct. 7, 1970, P. L. 91-441, Title V, § 506(a), 84 Stat. 912.

**1517. Transportation or disposal of research quantities or in emergency situations.**—Nothing contained in this section shall be deemed to restrict the transportation or disposal of research quantities of any lethal chemical or any biological warfare agent, or to delay or prevent, in emergency situations either within or outside the United States, the immediate disposal together with any necessary associated transportation, of any lethal chemical or any biological warfare agent when compliance with the procedures and requirements of this section would clearly endanger the health or safety of any person. (Nov. 19, 1969, P. L. 91-121, Title IV, § 409(g), as added Oct. 7, 1970, P. L. 91-441, Title V, § 506(b)(4), 84 Stat. 912.)

**1518. Detoxification prior to disposal.**—On and after the date of enactment of this Act [Oct. 7, 1970], no chemical or biological warfare agent shall be disposed of within or outside the United States unless such agent has been detoxified or made harmless to man and his environment unless immediate disposal is clearly necessary, in an emergency, to safeguard human life. An immediate report should be made to Congress in the event of such disposal. (Oct. 7, 1970, P. L. 91-441, Title V, § 506(d), 84 Stat. 913.)

### CHAPTER 33.—WAR POWERS

|         |   |
|---------|---|
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**1541. Purpose and policy.**—(a) It is the purpose of this joint resolution [50 USCS §§ 1541-1548] to fulfill the intent of the framers of the Constitution of the United States and insure that the collective judgment of both the Congress and the President will apply to the introduction of United States Armed Forces into hostilities, or into situations where imminent involvement in hostilities is clearly indicated by the circumstances, and to the continued use of such forces in hostilities or in such situations.

(b) Under article I, section 8, of the Constitution, it is specifically provided that the Congress shall have the power to make all laws necessary and proper for carrying into execution, not only its own powers but also all other powers vested by the Constitution in the Government of the United States, or in any department or officer thereof.

(c) The constitutional powers of the President as Commander-in-Chief to introduce United States Armed Forces into hostilities, or into situations where imminent involvement in hostilities is clearly indicated by the circumstances, are exercised only pursuant to (1) a declaration of war, (2) specific statutory authorization, or (3) a national emergency created by attack upon the United States, its territories or possessions, or its armed forces. (Nov. 7, 1973, P. L. 93-148, § 2, 87 Stat. 555.)

Effective date.—Section 10 of Act Nov. 7, 1973, P. L. 93-148, 87 Stat. 559, provided: "This joint resolution [50 USCS §§ 1541-1548] shall take effect on the date of its enactment [Nov. 7, 1973]."

Short title.—Section 1 of Act Nov. 7, 1973, P. L. 93-148, 87 Stat. 555, provided: "This joint resolution [50 USCS §§ 1541-1548] may be cited as the 'War Powers Resolution'."

**1542. Consultation.**—The President in every possible instance shall consult with Congress before introducing United States Armed Forces into hostilities or into situations where imminent involvement in hostilities is clearly indicated by the circumstances, and after every such introduction shall consult regularly with the Congress until United States Armed Forces are no longer engaged in hostilities or have been removed from such situations. (Nov. 7, 1973, P. L. 93-148, § 3, 87 Stat. 555.)

**1543. Reporting.**—(a) In the absence of a declaration of war, in any case in which United States Armed Forces are introduced—

(1) into hostilities or into situations where imminent involvement in hostilities is clearly indicated by the circumstances;

(2) into the territory, airspace or waters of a foreign nation, while equipped for combat, except for deployments which relate solely to supply, replacement, repair, or training of such forces; or

(3) in numbers which substantially enlarge



United States Armed Forces equipped for combat already located in a foreign nation;

the President shall submit within 48 hours to the Speaker of the House of Representatives and to the President pro tempore of the Senate a report, in writing, setting forth—

(A) the circumstances necessitating the introduction of United States Armed Forces;

(B) the constitutional and legislative authority under which such introduction took place; and

(C) the estimated scope and duration of the hostilities or involvement.

(b) The President shall provide such other information as the Congress may request in the fulfillment of its constitutional responsibilities with respect to committing the Nation to war and to the use of United States Armed Forces abroad.

(c) Whenever United States Armed Forces are introduced into hostilities or into any situation described in subsection (a) of this section, the President shall, so long as such armed forces continue to be engaged in such hostilities or situation, report to the Congress periodically on the status of such hostilities or situation as well as on the scope and duration of such hostilities or situation, but in no event shall he report to the Congress less often than once every six months. (Nov. 7, 1973, P. L. 93-148, § 4, 87 Stat. 555.)

**1544. Congressional action.**—(a) Each report submitted pursuant to section 4(a)(1) [50 USCS § 1543(a)(1)] shall be transmitted to the Speaker of the House of Representatives and to the President pro tempore of the Senate on the same calendar day. Each report so transmitted shall be referred to the Committee on Foreign Affairs of the House of Representatives and to the Committee on Foreign Relations of the Senate for appropriate action. If, when the report is transmitted, the Congress has adjourned sine die or has adjourned for any period in excess of three calendar days, the Speaker of the House of Representatives and the President pro tempore of the Senate, if they deem it advisable (or if petitioned by at least 30 percent of the membership of their respective Houses) shall jointly request the President to convene Congress in order that it may consider the report and take appropriate action pursuant to this section.

(b) Within sixty calendar days after a report is submitted or is required to be submitted pursuant to section 4(a)(1) [50 USCS § 1543(a)(1)], whichever is earlier, the President shall terminate any use of United States Armed Forces with respect to which such report was submitted (or required to be submitted), unless the Congress (1) has declared war or has enacted a specific authorization for such use of United States Armed Forces, (2) has extended

by law such sixty-day period, or (3) is physically unable to meet as a result of an armed attack upon the United States. Such sixty-day period shall be extended for not more than an additional thirty days if the President determines and certifies to the Congress in writing that unavoidable military necessity respecting the safety of United States Armed Forces requires the continued use of such armed forces in the course of bringing about a prompt removal of such forces.

(c) Notwithstanding subsection (b), at any time that United States Armed Forces are engaged in hostilities outside the territory of the United States, its possession and territories without a declaration of war or specific statutory authorization, such forces shall be removed by the President if the Congress so directs by concurrent resolution. (Nov. 7, 1973, P. L. 93-148, § 5, 87 Stat. 556.)

**1545. Congressional priority procedures for joint resolution or bill.**—(a) Any joint resolution or bill introduced pursuant to section 5(b) [50 USCS § 1544(b)] at least thirty calendar days before the expiration of the sixty-day period specified in such section shall be referred to the Committee on Foreign Affairs of the House of Representatives or the Committee on Foreign Relations of the Senate, as the case may be, and such committee shall report one such joint resolution or bill, together with its recommendations, not later than twenty-four calendar days before the expiration of the sixty-day period specified in such section, unless such House shall otherwise determine by the yeas and nays.

(b) Any joint resolution or bill so reported shall become the pending business of the House in question (in the case of the Senate the time for debate shall be equally divided between the proponents and the opponents), and shall be voted on within three calendar days thereafter, unless such House shall otherwise determine by yeas and nays.

(c) Such a joint resolution or bill passed by one House shall be referred to the committee of the other House named in subsection (a) and shall be reported out not later than fourteen calendar days before the expiration of the sixty-day period specified in section 5(b) [50 USCS § 1544(b)]. The joint resolution or bill so reported shall become the pending business of the House in question and shall be voted on within three calendar days after it has been reported, unless such House shall otherwise determine by yeas and nays.

(d) In the case of any disagreement between the two Houses of Congress with respect to a joint resolution or bill passed by both Houses, conferees shall be promptly appointed and the committee of conference shall make and file a report with respect to such resolution or bill not later than four calendar days before the expira-

See CFR Tables at beginning of this supplement

tion of the sixty-day period specified in section 5(b) [50 USCS § 1544(b)]. In the event the conferees are unable to agree within 48 hours, they shall report back to their respective Houses in disagreement. Notwithstanding any rule in either House concerning the printing of conference reports in the Record or concerning any delay in the consideration of such reports, such report shall be acted on by both Houses not later than the expiration of such sixty-day period. (Nov. 7, 1973, P. L. 93-148, § 6, 87 Stat. 557.)

1546. Congressional priority procedures for concurrent resolution.—(a) Any concurrent resolution introduced pursuant to section 5(c) [50 USCS § 1544(c)] shall be referred to the Committee on Foreign Affairs of the House of Representatives or the Committee on Foreign Relations of the Senate, as the case may be, and one such concurrent resolution shall be reported out by such committee together with its recommendations within fifteen calendar days, unless such House shall otherwise determine by the yeas and nays.

(b) Any concurrent resolution so reported shall become the pending business of the House in question (in the case of the Senate the time for debate shall be equally divided between the proponents and the opponents) and shall be voted on within three calendar days thereafter, unless such House shall otherwise determine by yeas and nays.

(c) Such a concurrent resolution passed by one House shall be referred to the committee of the other House named in subsection (a) and shall be reported out by such committee together with its recommendations within fifteen calendar days and shall thereupon become the pending business of such House and shall be voted upon within three calendar days, unless such House shall otherwise determine by yeas and nays.

(d) In the case of any disagreement between the two Houses of Congress with respect to a concurrent resolution passed by both Houses, conferees shall be promptly appointed and the committee of conference shall make and file a report with respect to such concurrent resolution within six calendar days after the legislation is referred to the committee of conference. Notwithstanding any rule in either House concerning the printing of conference reports in the Record or concerning any delay in the consideration of such reports, such report shall be acted on by both Houses not later than six calendar days after the conference report is filed. In the event the conferees are unable to agree within 48 hours, they shall report back to their respective Houses in disagreement. (Nov. 7, 1973, P. L. 93-148, § 7, 87 Stat. 557.)

1547. Interpretation of joint resolution.—(a) Authority to introduce United States Armed

Forces into hostilities or into situations wherein involvement in hostilities is clearly indicated by the circumstances shall not be inferred—

(1) from any provision of law (whether or not in effect before the date of the enactment of this joint resolution), including any provision contained in any appropriation Act, unless such provision specifically authorizes the introduction of United States Armed Forces into hostilities or into such situations and states that it is intended to constitute specific statutory authorization within the meaning of this joint resolution; or

(2) from any treaty heretofore or hereafter ratified unless such treaty is implemented by legislation specifically authorizing the introduction of United States Armed Forces into hostilities or into such situations and stating that it is intended to constitute specific statutory authorization within the meaning of this joint resolution.

(b) Nothing in this joint resolution [50 USCS §§ 1541-1548] shall be construed to require any further specific statutory authorization to permit members of United States Armed Forces to participate jointly with members of the armed forces of one or more foreign countries in the headquarters operations of high-level military commands which were established prior to the date of enactment of this joint resolution and pursuant to the United Nations Charter or any treaty ratified by the United States prior to such date.

(c) For purposes of this joint resolution [50 USCS §§ 1541-1548], the term "introduction of United States Armed Forces" includes the assignment of members of such armed forces to command, coordinate, participate in the movement of, or accompany the regular or irregular military forces of any foreign country or government when such military forces are engaged, or there exists an imminent threat that such forces will become engaged, in hostilities.

(d) Nothing in this joint resolution [50 USCS §§ 1541-1548]—

(1) is intended to alter the constitutional authority of the Congress or of the President, or the provisions of existing treaties; or

(2) shall be construed as granting any authority to the President with respect to the introduction of United States Armed Forces into hostilities or into situations wherein involvement in hostilities is clearly indicated by the circumstances which authority he would not have had in the absence of this joint resolution. (Nov. 7, 1973, P. L. 93-148, § 8, 87 Stat. 558.)

1548. Separability clause.—If any provision of this joint resolution [50 USCS §§ 1541-1548] or the application thereof to any person or circumstance is held invalid, the remainder of the joint resolution and the application of such provision to any other person or circumstance shall not be affected thereby. (Nov. 7, 1973, P. L. 93-148, § 9, 87 Stat. 559.)

See CFR Tables at beginning of this supplement

#### REFERENCES

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6. General Accounting Office, "Additional Cost of the All-Volunteer Force," February 1978.
7. General Research Corporation, "An Econometric Analysis of Volunteer Enlistments by Service and Cost Effectiveness Comparison of Service Incentive Programs," October 1974.
8. OASD(MRA&L) "Study of the All-Volunteer Force," (Interim Report), January 1978.